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Immersive Ideals / Critical Distances

**A Study of the Affinity Between Artistic Ideologies Based in Virtual Reality
and Previous Immersive Idioms**

by

Joseph Nechvatal

Ph.D. candidate at the Centre for Advanced Inquiry in the Interactive Arts (CAiiA),
University of Wales College, Newport, Wales, U. K.

1, Rue Pecquay
75004 Paris FRANCE

143 Ludlow Street (14)
New York, NY
10002 USA

email:
jnech@imagnet.fr

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Abstract

My research into Virtual Reality technology and its central property of *immersion* has indicated that immersion in Virtual Reality (VR) electronic systems is a significant key to the understanding of contemporary culture as well as considerable aspects of previous culture as detected in the histories of philosophy and the visual arts. The fundamental change in aesthetic perception engendered by immersion, a perception which is connected to the ideal of *total-immersion* in virtual space, identifies certain shifts in ontology which are relevant to a better understanding of the human being. This understanding was achieved through a broad inquiry into the histories of Virtual Reality, philosophy, and the visual arts and has led to the formulation of an *aesthetic theory of immersive consciousness* indicative of *immersive culture*.

The primary subject of this discourse is *immersion* then: an experience which will be identified within the dissertation as the indispensable characteristic of Virtual Reality. The understanding of immersion arrived at here will be used to fashion a synchronous theory of art particularly informed by encounters and concepts of immersion into virtuality. To sufficiently address this subject in a scholarly fashion, I have researched, found and accumulated aesthetic and philosophic examples of immersive tendencies, as found within the histories of art and philosophy, which subsequently contributed towards the articulation of what I have come to call *immersive consciousness*. As a result of formulating such an immersive consciousness, a good deal of the basis for the questioning of the Western ontological tradition has been found in the Western tradition itself when we look with new eyes and ask new uncertain questions. Moreover, this immersive consciousness will be used to propose some abstract questions encircling today's electronic-based culture.

Through the structuring of the argument within the thesis - and overtly within the conclusion - I have articulated a non-teleological creative strategy which provides the basis for an unconstraining integration of noologies (ways of semblancing the thinking process). This strategy provides a means of exemplifying - and for honoring - various methods of thinking. This structuring strategy is consistent with the 'hacker ethic' as defined by Steven Levy, as a demand that access to computers - and anything which might teach us something about the way the world works - should be unlimited and total. To follow this strategy, this dissertation has set out to understand how topical conceptions of virtual immersion connect to pre-existing systems of thought as revealed in art as they have extended out of antecedent ontological self-understands, historical human self-understands which have evidenced themselves in the elaboration of technological objectives. To do this I have forged a certain rhizomatic paternity/maternity for Virtual Reality within this dissertation by joining choice immersive examples of simulacra technology into mental connections with the relevant examples culled from the histories of art, architecture, information-technology, sex, myth, space, consciousness and philosophy.

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Prolegomena: An Outline of the Rhetorical Strategy, Structure and Elaboration of the Thesis's Arguments

What is real is the becoming itself, the block of becoming, not supposedly fixed terms through which that which becomes passes.

-Gilles Deleuze and Félix Guattari, *A Thousand Plateaus*

The emergence of cyberspace makes more pressing certain questions that artists have been posing for more than a century. These questions directly modify the "frame": the work and its limits, the conventions of exhibition, reception, reproduction, distribution, interpretation, and the different forms of distinction brought about by them.

-Pierre Lévy, *Aesthetics of Cyberspace*

When everything is connected to everything in a distributed network, everything happens at once.

-Kevin Kelly, *Out of Control*

...'consciousness' in the function of self-reflexivity should be operating within the elements of the work (proposition) of art itself.

-Joseph Kosuth, *Within the Context: Modernism and Critical Practice*

...meaning is a contest between past history, the current system, and future change...

-Richard Bolton, *Calling All Codes*

This dissertation identifies artistic and philosophical positions, strategies and practices which substantially contribute evidence towards the development of an aesthetic theory of immersive consciousness within various historical periods (including present developments involving Virtual Reality (VR) technology). These positions, strategies and practices of immersion will provide my thesis with the historical evidence needed to propose a convincing theory of Immersive Art based on conditions of immersive consciousness.

The dissertation's aim is to open a space for art theory which constitutes an alternative, though not necessarily a competitor, to the frontal manner in which most visual art and art theory is generally practised. As such, its strategic goal is less focused upon delivering to the reader a sealed cultural product of recognition, and more upon calling the reader into an immersive state of process which is based on the attributes of continuous spanning (*distentio*). This emphasis on continuous spanning - which itself is indicative of the immersive aesthetic procedure - lends a focus to thought which delivers a sense of continuity over time (*extentio animi*), as opposed to readily available - and thus fixed - intellectual strategies. This is particularly so in that the starting point of this intellectual investigation is the immersive position from within: *intus*. A position which necessitates a broad-spanning focus for thought.

Key unaccustomed concepts encountered here are: *immersion, immersionability, immersive ideals, ideal beholdings, omnijectivity, viractuality, viewpant, total-immersion, total-art, spatial summation, holonogic models, envelope vision, cognitive-seeing, aoristic excess, synthetic-immersive-creation, logocentric*

apparatus, allocentric mirror world perspective, expanding FOVs, janusian connectivity, the technological sublime, rhizomatic hyper-totalizations, total-data-works, peripheral visuality, hyper-being, cocooning magnitude, expanding magnitude, hyper-cognition, spherical thinking, homospatiality, immersive consciousness, and immersive culture

My active presupposition on commencing this inquiry into immersion was that there have been manifested, during certain moments in time, ideas of immersion which approach what we know today as the virtual. These moments also are suggestive of disembodied experiences and expectations notable to virtuality and particularly to Virtual Reality. In elaborating the thesis I have identified within various historical periods, including contemporary developments involving Virtual Reality technology, aesthetic and philosophical positions, strategies, and practices which have substantially contributed towards the development of a theory of aesthetic immersion. Thereby I have clarified salient aesthetic features of immersive experience. Moreover, I have created a productive association of aesthetic knowledge which may be identified as the basis of an immersive culture and therefore strengthened art's position in opposition to the strictly commercial and/or military applications of Virtual Reality. This has been achieved under the retroactive influence of immersive Virtual Reality technology.

The thesis's argument will show that immersive spherical thinking, as stimulated by the immersive spherical perspective, opens up a territory of signification and possibility for the creation of hybrid and deterritorialised meanings. Meaning in art and in life then advances by seeing more clearly the underlying assumptions of excess inherent in the immersive outlook, by facing up to the radical implications of those assumptions, and by purging itself from conventional ways of thinking.

The method used within this dissertation has been to reflect on the insights Virtual Reality suggests to the traditional Western history of unified being (which indeed engenders extraordinarily deep conflicts) and this has entailed a review of past and present approaches towards ontology and an analysis of a variety of artistic maneuvers. Within the dissertation I have non-teleologically synthesised these questions and examples of ontology into an interrelated theoretical model for immersive consciousness in art by clarifying an underlying philosophy of immersive significance. I have thus outlined an integrative immersive philosophy by tracing the immersive impetus through its various expressions so as to examine the immersive philosophy from all possible sides. Of principal interest has been the discussion of *subject/object* cognition.

To a large extent, this thesis contains a theory of immersive reconciliation where once apparent conflicting ideas and intellectual positions are mitigated in interplay. Most notably, a philosophical interplay will be conducted between the philosophic positions which address ideals, aspects of phenomenology, ontology and idealism, with that of Gilles Deleuze and Félix Guattari's epistemology based on the model of the rhizome.

Specifically, I will present here a rapprochement of the apparent opposition between the use of ideals, phenomenology, ontology and idealism with the rhizome by designating phenomenology, ontology and idealism as active notes (among all other imaginable notes) of connection within the rhizome model of epistemology. In so doing, I will challenge the intellectual point that for Deleuze/Guattari phenomenology, ontology and idealism are fundamentally opposed to the rhizome by insisting that nothing is fundamentally opposed to the rhizome, but that everything within intellectual history is immersed in and connected to it. Within this thesis, then, I will regard the history of phenomenology, ontology and idealism as being included within the intellectual rhizome, particularly in light of the rhizomatizing experience of total-immersion within total-art (i.e. the lost-but-connected umbrageous mentality encouraged by entry into virtual aesthetic worlds): our main point of departure.

The thesis is divided into three sections. All three sections make interplaying synthetic application of a variety of intellectual strains in the interests of providing the foundation for a strategy of immersive discovery. However, each section has its particular emphasis. In terms of methodology, Section A is a combination of both theoretical/speculative and fact-based/historical research which accounts the beginning of Virtual Reality and certain historical developments in philosophy which I found salient to the larger investigation into the basis of a noology (the study of images of thought) salient to experiences and understandings of the primary feature of Virtual Reality: *immersion*. The key concept of *omnijectivity* (the metaphysical concept stemming from the discoveries of quantum physics which teaches us that mind (previously considered the subjective realm) and matter (previously considered as the objective realm) are inextricably linked) will reconcile the relativist ("subjective") style found in Section A with the more absolutist ("objective") style of Section B of the thesis - as omnijectivity is possible only with the conflation of polarities; a stance which recognizes the mutual interpenetration that unites the apparent opposites of subjectivity and objectivity.

Section B is primarily exemplary of the noology of immersionability hinted at in Section A and propounded in Section C: *spherical thinking*. The thesis's argument will indicate how spherical thinking/art supersedes the tabular space laid out by classical thought. Most of these examples are drawn from the history of art, though other events found relevant from other fields are cited as well. This non-teleological noology makes use of both the rhizomatic nature (multiplicitious/heterogeneous) of the thought process typical of the art experience and the *gesamtkunstwerk* totalization typical of Virtual Reality, which paradoxically promotes it. These supposed opposing tendencies are reconciled by the notion I put forward of the *hyper-total*: a notion of an immersive orb of connecting vectors which suggest an enveloping mental space that allows unaccustomed creative situations and sensations to connect and tolerantly co-exist in janusian fashion.

Given our heightening condition of connectivity, the heterogeneous, multiplicitous, spreading and non-hierarchical nature of the epistemological rhizome come together under the hyper (i.e. connected) effect of the hyper-total. I will first exemplify this notion of the hyper-total with the physically contained (but optically boundless) palimpsestesque, all-over, wall-paper-like image spread found in the Apse of Lascaux in BIII. Later, in BV, I will speak of a *visual hyper-totality*: a distinct visual-cognitive proclivity which addresses the multiplicitous/heterogeneous impetus within the *gesamtkunstwerk* total. I will define this visual hyper-totality as being produced by an all-over, elaborate, spread out distribution of visual incident which calls upon the optic procedure of spatial summation; a process which unconsciously totalizes the visual excess encountered. This visual hyper-totality will prepare the basis for an *holonic vision-cognition* which is essential to the *continuous but coherent* quality essential to immersive art. Then, still later in BXXIV, I will refer to the hyper-total as a *summational but all-over net-condition/awareness of plurality in hyper-homogeneity; a supplementary order of diversity within orders of hyper-totality*. This condition will relate to what I call the *hyper-cognitive* in respect to my pre-conclusions, pre-conclusions which lead to the resulting noology of spherical thinking.

The hyper-cognitive is where the particular (now updated by electronic connectivity) is seen as part of an accrual total system by virtue of its being connected to everything else. The strategy of hyper-anything includes principles of networked connections and electronic links which give multiple choices of passages to follow and continually new branching possibilities. The total-hyper-being model for a new connected noology (especially when placing emphasis on tabulating an evasive omni-perceptual orb) is the self-re-programmable internal function which explicitly offers a furtherance in envisioning internal, anti-hierarchical models of our patterns of thought to ourselves.

This self-connected strategic approach is based on the premise that behind all of today's immersive VR-art (what I will term in the dissertation as *VE°art*), either representational or abstract, is the hypothetical exploration of the introspective rhizomatizing world of the imagination under the influence of today's high-frequency, electronic/computerised environment. Moreover, since it is difficult making sense of today's swirling, phantasmagorical media society, the general proposition behind electronic-based art may best be to look for a paradoxical summation of this uncertainty by taking advantage of today's superficial image saturation; a saturation so dense that it fails to communicate anything particular at all upon which we can concur - except perhaps its overall incomprehensible sense of ripe delirium as the reproduction system pulses with higher and higher, faster and faster flows of digital data to the point of near hysteria.

Perhaps the result of this ripe information abundance is that the greater the amount of information that flows, the greater the non-teleological uncertainty which is produced. So, the tremendous load of imagery/sound/text

information digitally produced and reproduced all round us today ultimately seems to make less, not more, conventional teleological sense.

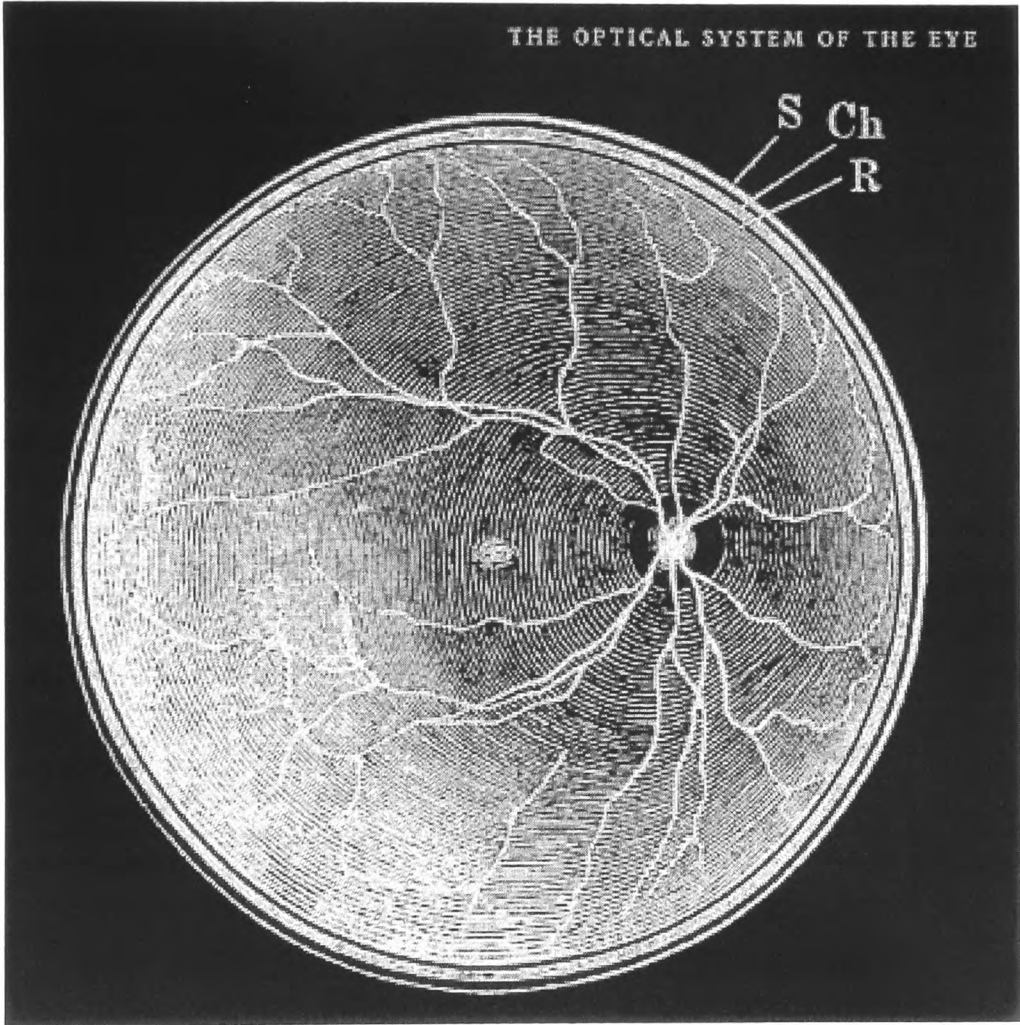
If accepted, this supposition, it seems to me, plays into the history of abstract art which teaches us that art may refuse to recognise all thought as existing in the form of purposeful representation, and that by scanning the spread of representation art may formulate an understanding of the laws that provide representation with its organizational basis. As a result, in my view, it is electronic-based art's onus to see what unconventional, paradoxical, summational sense - in terms of the rhizomatizing world of the imagination - it might make of all this based on an appropriately decadent reading of our paradoxically material-based (yet electronically activated) social media environment.

Perhaps such a basically abstract, open, and thus paradoxical, summation would begin with the presumption that an information-loaded nuclear weapon has already exploded, showering us with bits of radioactive-like information bytes, thus drastically changing the way in which we perceive and act - even in our private subconscious dream worlds. It is this internal, subconscious, paradoxical drama - this subconscious contradictory tension - which I found essential in developing the rhetorical strategy of this thesis's argument and as a subject specifically suitable for electronic-based art theory. This subject, and the rhetorical strategy needed to explore it, especially interested me in that encounters with immersive computer simulation, one may assume, might create an opportunity for personal transgression and for a vertiginous ecstasy of thought. Hence excelling the assumed determinism of the technological-based phenomenon inherent (supposedly) in our post-industrial information society.

Indeed, it seems to me that as human psychic energies are stifled and/or bypassed by certain controlling aspects of mass informational technology, such a personally transgressive ecstatic phenomena will most likely increasingly break out in forms of spherical thinking/art. Similarly, simulation technology (when used in the creation of electronic-based art) will promote an indispensable alienation from the socially constructed self necessary for the outburst of such ecstatic experiences/acts. Inversely, electronic technology will enable the contemporary artist to express ecstatic reactions in ways never before possible. Thus, this ecstatic counteraction might provide a phantasmal defiance aimed against the controlling world's blandness. This aesthetic philosophy might provide, then, a fundamental antithesis to the authoritarian, mechanical, simulated rigidities of the controlling technical world. Indeed, this goal drove the rhetorical strategy of my thesis.

The emergence of the spectral/spherical theoretical project I have outlined above will, I hope, contribute to the surpassing of the field of non-electronic thought representations by inventing a spherical thinking/art in which what matters is no longer only identities, or logos, or distinctive characters, but rather lush, phantasmagorical interpretations developed on the basis of hyper-total inclusion. Such dynamic, abstract, spherical

thinking/forms (and their connections) - all these will be presented to our gaze only in an already pre-connected vivacious spherical state, already articulated in that insinuated spherical thinking that is linking them in an immersive discourse which is both non-teleologically oriented and intellectually responsible.



Introduction: Frame and Excess

TO THE REAR IN FRONT OF ON TOP OF UNDERNEATH ALL AROUND

Claude Thibaut: *Isn't this radical uncertainty brought about by Virtual Reality likely to challenge man's vision of himself and the world?*

Jean Baudrillard: *Certainly, because it is the system of representation that is at issue. The image that he has of himself is virtualized. One is no longer in front of the mirror; one is in the screen, which is entirely different.*

-from *Philosophy Discussion with Jean Baudrillard: Interview by Claude Thibaut, March 6, 1996*

Space is an ambiguous field where positions change, where viewpoint becomes scene, seer becomes object, and where depth is the very reversibility of dimensions that unfold with the movements of the body.

-Allen Weiss, *Mirrors of Infinity: The French Formal Garden and 17th Century Metaphysics*

In the realm of the affective imponderable, the image provided by my nerves takes the form of the highest intellectuality, which I refuse to strip of its quality of intellectuality.

- Antonin Artaud, *Manifesto In Clear Language*

To the process of the dissociation of man and body, Virtual Reality brings a new variation, another way for the body to disappear.

-David Le Breton, *The Body in the Modern Imagination*

Transparency is the property of the eyeball, projected outward as luminous space, interpreting quanta of energy in terms of the gelatinous fibers in the head.

-Alan Watts, *The Joyous Cosmology*

The evolution of art is something internal, something philosophical and is not a visual phenomenon.

-Lucio Fontana, *from his last interview*

Following, the reader will find an extensive proem to *Immersive Ideals / Critical Distances*, a generously illustrated synthetic exploration of art histories, cultural ideologies and metaphysical ontologies based on the principal defining characteristic of Virtual Reality (VR): *immersion*. The primary explanatory goal of the research conducted here into *immersive ideals* will be to enthuse art theory by submitting it to a complex dialogical cross-examination which hinges on the concept of *immersionability* so as to define an historical and current philosophic sense of immersive visualisation. Through this exploration I shall seek to define the main attributes of what I will designate as immersive culture and its ideational background and paradigmatic implications as related to art theory.

The resulting *aesthetic theory of immersion* will not merely be about VR however (even though with VR immersion attains a rare acuity) but about its antecedent philosophical concepts which immersive virtual technology retrospectively re-emphasises; a web of concepts which are themselves associated with other concepts corresponding to other technological and metaphysical conditions. The criteria for including and exploring the divers art historical examples and their context which appear in Section B, will be whether they

contribute towards flushing out a satisfactory *aesthetic theory of immersive consciousness* and advance the formation of an association of artworks and assemblage of philosophic ideas which can be designated as indicative of *immersive culture*. But I will show more than *which* art strategies give rise to aesthetic immersive experience *when*. I will also give an account, as full as possible, of *how* and *why* these experiences occur. The *how* question will be initially addressed in Section A; the section which addresses the inquiry into immersive technology and psychology along with background philosophical theories which will be useful in determining the *why* question. By nonreductively synthesising the *which*, *when* and *how* of aesthetic immersionability, an extensive explanatory theory of aesthetic immersive consciousness and its possible functions will be suggested in Section C with a number of theoretical *whys*.

Immersive Ideals / Critical Distances is then an interdisciplinary study of Virtual Reality's "key feature", immersion (Heim, 1998, p. 54) and virtual immersion's foreshadowing sources, ideal topos, and ensuing influences as applicable to art theory in the formation of a general philosophic immersive theory of culture. The philosophic rhizomatic theory of Gilles Deleuze (1925-1995) and Félix Guattari (1930-1992), at a general level, supports such an interdisciplinarian connectivist approach towards theorising immersive experience, as rhizomatic theory encourages philosophic non-linear and non-restrictive interdisciplinary thinking and hence reinterpretation, which in this case will proceed from the point of view (not a point in fact anymore, but an orb) of *virtual immersion*. (Deleuze & Guattari, 1987) A *rhizome* literally is a root-like plant stem that forms a large entwined spherical zone of small roots which criss-cross. In the philosophical writings of Deleuze and Guattari the term is used as a metaphor for an epistemology (that in philosophy which is concerned with theories of knowledge) that spreads in all directions simultaneously. (Deleuze & Guattari, 1994, p. 7) More specifically, Deleuze and Guattari define the rhizome as that which is "reducible to neither the One or the multiple. (...) It has neither beginning nor end, but always a middle (milieu) from which it grows and which it overspills. It constitutes linear multiplicities with n dimensions having neither subject nor object... ." (Deleuze & Guattari, 1987, p. 21)

Concerning the metaphorical tropes of this exploration, I immediately want to say that even as I have proposed in the title of my investigation what looks to be a binary opposition between immersion and distance, I don't conceive of this opposition as a simple binarism, but rather it is far more gradient, dialectical, and phenomenological than that. The emphasis taken here will be on treating the histories of art and philosophy as multi-layered, heterogeneous, idealistic constructions; as operative assemblages of connections and frequencies which once linked elucidate various chimerical *disembodied* (Mitchell, W. J., pp. 43-44) relationships between the protoplasmic body-image and spatial conceptions (what Jean-Louis Boissier sees as the consequence of "all interactive situations" which he maintains "entail a virtualisation of the body by the production that they imply in the fluctuating data of digitalisation" (Boissier, 1994b, p. 2)) within a generalised ideal sense of immersionability which manifested in art and philosophy over time. This approach

is consistent with Gilles Deleuze's awareness that every condition includes a history of its ideal events. (Deleuze, 1990) However, I will accord top primacy to *enthused participatory notions of artistically mediated awareness* within this study and not retreat into an easy extolling polemical stance concerning the necessity for critical distance, even as I appreciate the intellectually productive and cognition-raising abilities of critical distance.

To endeavour an understanding of immersive propensity in relationship to our effort to discern an extensive pattern of inferred passions which may together suggest a number of immersive ideals requires, I believe, the judicious use of the process of Deleuzian/Guattarian nomadic thinking. (Deleuze & Guattari, 1986) Accordingly, Deleuzian/Guattarian immersive descriptions would be composed of variously formed segments, stratas, and lines of flight which involve territorialising as well as deterritorialising spacio/psychic activities. (Deleuze & Guattari, 1983, p. 2) Even so, I acknowledge in advance that all methods, explanations, and theories (including the nomadic) inevitably distance consciousness from its first sense of full and total participation. This acknowledgement will remain a particularly important point of consideration in this dissertation, as ideas of spacio/psychic critical distance and non-distanced (non-spatial) disembodied fusion rub up against each other and influence the psychic space required for reflection on the thorny concept of *aesthetic immersion* (which entails a lack of distance) as the atmospheric gulf between the immersant and the immersive aesthetic environment is ideally dissolved in VR's exemplary standard and goal of perfect functionality: *total-immersion*.

Total-immersion, that state of virtual being which is considered the holy grail of the VR industry, can be characterised as a total lack of psychic distance between the immersant's body-image and the immersive environment (accompanied by a "feeling of plunging into another world"). (Heim, 1998, p. 18) Total-immersion is implied *complete presence* (Barfield & Weghorst) within the insinuated space of a virtual surrounding where everything within that sphere relates necessarily to the proposed "reality" of that world's cyberspace and where the immersant is seemingly altogether disconnected from exterior physical space. As such, total-immersion promotes a conflated but promiscuous ontological feeling (awareness/consciousness) where aesthetic cognition of the limits of the aesthetic environment attain the actual state of "the generally non-mathematizable subjective world of consciousness" (Shear, p. 194) itself: *non-spatiality*. (McGinn, pp. 220-223) This ideal standard of total conflation, a standard which the VR industry itself has established for VR, will carry a good deal of the explanatory burden in the formation of a theory of aesthetic immersive consciousness.

A rhizomatic recombinant mythos based on ideals of total-immersion detected in art and philosophy which explores certain hypothetical states of semi-disembodiment (i.e., semi-deprivation of normal cognitive body-image; or what Mark Pesce identified as what occurs in the mind when the self, via technological extensions,

removes itself from itself (Pesce, 1993)) needs to weave the strands of art historical immersive manifestations *sub specie immersivis* (from the point of view of immersion). By doing so, probable questions will be raised around immersion concerning totalising idealisms (all assertions of totalities in this text are recognised as cognitive unification operations) and their imaginative effects on the ways we today model the world in art. In this respect, this dissertation is informed by an idea adapted from the Swiss art historian Heinrich Wölfflin's (1864-1945) *Principles of Art History* in which Wölfflin argued for a classification of styles based on historical modes of *ideal imaginative beholding*. Beginning with the aesthetic theories of his teacher Jacob Burckhardt (1818-1897), particularly Burckhardt's doctrine of equivalents in art (whereby visual and ideal values are seen as interchangeable), Wölfflin developed the concept of an *ideal imaginative beholding* which defines the formal disposition of an era's style in tandem with his theory of *prefigurations*, which postulated intuitive method as inclusive in art. (Wölfflin, 1915)

Accordingly, we will be studying *imaginative and intuitive ideals of total-immersion* both from my point of view as a practising artist and as an art theoretician. Hence, besides preparing the reader for bounces back and forth between the first and the third person voice in the text, I shall establish straight away my fundamental contention that all art is conceptual and imaginative because art only exists conceptually (Kosuth), and that it participates in the imaginative metaphysical realm of externalised fabulation (Scholes), a notion which I find consistent with Georg Wilhelm Friedrich Hegel's (1770-1831) concept of art as idea rendered sensible. (Hegel, 1979) In this view, art is a fabrication, an imaginative beholding which makes us realise exactness through the powers of intuitive caprice. (Picasso) It seems to me however that one must take this basic understanding a bit further and maintain that art is utterly dependent upon, and is in fact, *metaphysics*: the philosophical study of the basic concepts of existence which include epistemology, ontology, and aesthetics as inaugurated by Aristotle's (384-322 BC) commentators. Or to put it the other way around, as the German philosopher Friedrich Wilhelm Josef von Schelling (1775-1854) did, "Without metaphysics, not only is there no philosophy, but no art". (Schenk, p. 184) For the idealist philosophers, the school to which Schelling belonged and for whom Hegel is considered the culmination (Aiken, p. 71), metaphysics is not a sort of magical super-physics but rather *ideology* itself. (Aiken, p. 115) Art's philosophical/metaphysical (and hence hypothetical) ideological underpinnings may not often be stated explicitly within the work however as, more times than not, art smoothly participates in the dominant metaphysics and ideology of the culture in which it appears. (Eagleton) Therefore the critical distance gained from a congregation of explicit metaphysical/ideological conceptions are fundamental to the understanding of *immersive art* (i.e., *art which attempts to include everything of perceptual worth within its domain ambiently but coherently and accordantly in an overall enveloping totality that is concerted, continuous, and without overly evident frame or border*), just as they are with all art, as art is never transparent but always stems from concealed and forgotten theory-laden processes of idealisation. (Wolff, 1993, p. 105)

So to begin I shall identify that in the schematised ideological aesthetics of virtual immersion the immersant discovers an *all-over, metaphysical and indeterminate algorithmic depth* (the basis of any computer program is an algorithm, a prescribed set of rules that define the parameters of a solution to a problem (Knuth)) and I can say forthwith that this is VR's *raison d'être* as it concerns art and art's discursive influence on our states of consciousness, which is only a start. Next we need to define what we mean by *consciousness*. This is not an uncomplicated matter, for as the philosopher and specialist in consciousness studies Dr. David Chalmers says in his seminal essay "Facing up to the Problem of Consciousness": "there is nothing that we know more intimately than conscious experience, but there is nothing harder to define". (Chalmers, 1995, p. 200)

Fundamental psychology breaks consciousness into two essential categories: the state of awareness and the subjective aspect of neurological activity (i.e., the impression of self so produced, whatever its actual cause). (O'Doherty, E. F.) There are sub-categories and variations of these however. For example, some researchers define consciousness as *the totality of experience at any given instant*, as opposed to *mind*, which is the sum of all past moments of consciousness. (Metzinger) Schelling, in agreement with Immanuel Kant (1724-1804), maintained that the only thing which we can have direct knowledge of is our consciousness. (Schelling, 1988) However, consciousness, in Aldous Huxley's (1894-1963) view, (as influenced by William James's (1842-1910) study *The Varieties of Religious Experience: A Study in Human Nature* (James)) is mainly an abridgement application which allows us to construct a coherent world view based on selective oblivion. (Huxley, Aldous, 1970, p. 22) Lately, Brian Massumi, Research Fellow at the Humanities Research Centre of the Australian National University, author, and a prominent English translator of Deleuze and Guattari, upheld Huxley's/James's "subtractive" understanding of consciousness by seeing both will and consciousness as "limitative, derived functions which reduce a complexity too rich to be functionally expressed". (Massumi, 1995, p. 90)

Dr. John Lilly, by using cognitive psychology's computational model of the mind, defined consciousness as the human biocomputer's "self-metaprogrammer". The biocomputer's programming, according to Lilly, is that set of internally consistent instructions which prepare, send, store, process, and select signal information in and out of the biocomputational activity of the brain, most of which can be adjusted through a self-metaprogramming process initiated by the self-metaprogrammer. (Lilly, 1974, pp. 138-139) According to Deleuze, consciousness is "the passage, or rather the awareness of the passage, from less potent totalities to more potent ones, and vice versa." (Deleuze, 1984, p. 21) This hypothesis receives support from Thomas Metzinger when he writes in *Conscious Experience* that "...holism is a higher-order property of consciousness" and that "this global unity of consciousness seems to be the most general phenomenological characteristic of conscious experience...". (Metzinger, p. 30) Hence the 19th century German philosopher Johann Gottlieb Fichte's (1762-1814) theorised "unity of consciousness" in which "all the opposites are united" (Fichte, 1889, p. 84) is confirmed by Metzinger's findings. Dr. Chalmers, in his book *The Conscious*

Mind, also confirms Fichte's theory by putting forth a notably unaccustomed elucidation of consciousness by discarding the dominant reductionist inclinations of modern science (with its experiential template that selectively filters and shapes awareness (Poincaré)). Chalmers established that previous cognitive neuroscience did not explain how subjective experience emanates from neural processes in the brain (an organic assemblage which consists of an estimated 13 billion neurons). For Chalmers, consciousness is to be circumscribed as "the phenomena of experience" (Chalmers, 1995, p. 201) which must be conceived *as a totality*: an irreducible manifestation that subsists at a basic stratum which cannot be conceived of as the aggregate of simpler corporeal parts. (Chalmers, 1996)



a view of the brain

When we bring together and cross-link the above concepts of consciousness we see that consciousness, basically, is the *awareness and appreciation of the feeling of being*. Indeed Chalmers states that "there is a direct correspondence between consciousness and awareness". (Chalmers, 1995, p. 212) This ontological definition of awareness as consciousness (an ontological, therefore essentially a metaphysical definition) will establish initial understandings into immersive consciousness and its place in constituting a supplementary art history in accordance with Deleuze's alternative history of philosophy. (Douglass, pp. 47-48) However, the preferred decisive point in understanding total-immersion in the context of art is its facilitation of a more potent *conscious-totally* in the creative art audience produced by merging the audience's perceptual circuitry seemingly with the artwork. In this light it might be possible to define immersive states of consciousness as *conditions and orders of conscious awareness in which perception-cognition (i.e., visual awareness linked to the process of forming intelligence) is found to consist of more than everyday (non-conceptual) vision* (Ivins, 1975) typically reveals, by merging it with some manifestation suggestive of a transcendent *more*. This condition may be thought of as a bypassing of habitual processes of spatial thinking (Howard & Templeton) through an assiduously expanded macro-vision/intelligence based on conditions of excess which provides the immersant with an unfilled sense of internal union with unrealisable breadth through implicative art.

By *states of immersive consciousness* I mean, then, our miscellaneous neurological/ontological sense of the gradient unity of sentient self in internal rapport with its surrounding milieu (Wilson, E. O., 1998); that visual/mental property of atmospheric self-attentive awareness, cognisance and feeling, that allows us to experience a sense of nexus with our ostensibly unified surroundings, albeit laced with vicissitudes. I have observed (in myself) that immersive states of consciousness tend towards unconstraintment while being based on a routine sense of shifting-self (immersed in degrees) within the ambient biosphere which is experienced when self-attentive.

In that my usage of the term, *immersive consciousness* corresponds to *an aesthetic moment's totality of experience when viewer and view coalesce*, immersive consciousness's metaphysical depth is not a pre or non post-modern (Sarup) metaphysical depth free from consciousness of its diverse objectives and results and pluralistic influences (plurality and diversity are essential to Post-Modernism (Jencks, p. 6)) as according to Theodor Adorno (1903-1969) in his *Aesthetic Theory*, art and aesthetics must not try to erase fractures through integration but rather to "preserve in the aesthetic whole the traces of those elements which may have resisted integration". (Adorno, 1984, p. 271) Consequently, as the reader will soon see, *Immersive Ideals / Critical Distances* contains traces of a wide number of diverse cultural, philosophical and theoretical concepts along with numerous extant art examples which I found useful in drawing out the sense in which immersive cultural traits (and the various pluralistic states of immersive consciousness which accompany them) are especially pertinent as I have been able to identify them and their background ideals over the span of time.

An understanding of this immersed, self-attentive shifting-self requires a surpassing of the limiting tropes of logical positivist empiricism (Mach, 1914) however, as immersive consciousness starts in the non-delineating darkness of closed but debonair eyes. This buoyant, dark, non-delineation, as Dr. John Lilly's report "The Effect of Sensory Deprivation on Consciousness" shows, provides a wide range of self-attentive potentialities for immersive consciousness which run counter to the dictates of logical positivism. (Lilly, 1962) Logical positivism was the early-20th century philosophical movement which emerged from the Vienna Circle group of philosophically minded scientists and logicians organised around Moritz Schlick (1882-1936) as influenced by the anti-subjectivist, positivist, empirical philosophy of the Austrian physicist and philosopher Ernst Mach (1838-1916). Logical positivism was based in opposition to the idealist philosophy of Hegel and hence stressed the exclusive value of logic and positivism (Comte) over self-attentiveness. Schlick and the Vienna Circle's other members; Otto Neurath (1882-1945), Kurt Gödel (1906-1978) and Rudolf Carnap (1891-1970) maintained that only verifiable statements (verified by observation or empirical data) were meaningful. Statements about art were nonsense to them. (Stewart, p. 85)

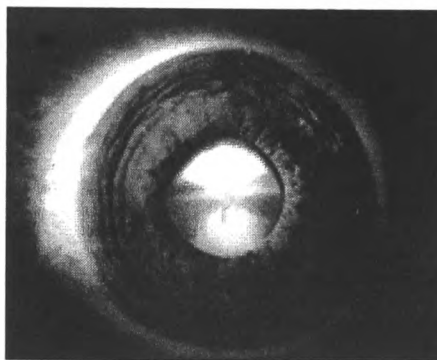
A consideration of this self-attentive, immersed, shifting-self is post logical positivist also in that it accepts various theories of consciousness which discuss consciousness as being emergent rather than representational.

(Churchland, 1986) Sigmund Freud (1856-1939) (who we must remember was a theorist who rooted his theories in anecdotal evidence and whose writing was literary) identified an artist as one who offers insights into such an emergent consciousness as it emerged from within the unconscious realm. (Ellenberger) Moreover, Martin Heidegger (1889-1976) maintained that *being*, which we shall study here, is the most unconscious of concepts because we are thoroughly immersed in it. (Heidegger, 1962) Siegfried Zielinski, foremost theoretician of media at the Köln Academy of Media and Ph.D. in philosophy, proposes that consciousness is our most unconscious interface, as it is "where world/worlds/reality/realities are formulated" (Hoekendijk, p. 3), an observation which compliments Fichte's contention that "all reality is in consciousness". (Fichte, 1889, p. 84)

The terminology *consciousness* means verbatim *with knowingness* and stems from the Latin verb *scire* (which means *to know*), as does the word *science*. But that is not all there is to it as applied to art. For consciousness in art seems to be ultimately like a web woven in the mind/body, of various silken-strands spun forth from interlacing states of unconscious desire (Meier) which semi-automatically control the paradigmatic creation and reception of art. (Lilly, 1974, p. xviii) This definition coincides with R. G. Collingwood's definition of consciousness, in paradigmatic art terms, as that which is a "kind of thought which stands closest to sensation or mere feeling" as "transformed into imagination". (Collingwood, p. 223) Paradigmatic consciousness has emerged in the 20th century due largely to the philosophical work of the American philosopher Thomas Kuhn who has argued that scientific "progress" does not simply occur in stages based on neutral observations but that all observation is theory-laden. For Kuhn, the history of science (and I would argue art as well) is characterised by revolutions in outlook. (Stewart, p. 93) Indeed unconscious desires shape the paradigms which contour intentional expressions in art through the subtle powers of sublimation when the sexual desires of the libido are turned into cultural ones via the mediation of the artist's ego. (Freud, 1958) The question of how Freudian unconscious desires are manifest in conscious cultural production and interpretation, will be one of our minor themes here throughout. This is a non-problematic working assumption in that even those who maintain that art is fundamentally a materialistic, social, and conscious product (Wolff, 1993, p. 1) acknowledge that the role and function of art is located in its power to change consciousness. (Wolff, 1993, p. 92)

We may begin then by establishing that bi-conscious visual acumen involves a spectral feedback between the perceiving agent and the *broad consciously and unconsciously perceived atmospheric aesthetic surroundings*. Ergo, with total-immersion as a model for how we may procure bi-conscious visual aptitude and awareness in its fullest intensity, we shall carefully check peripheral vision (Marr) in relationship to the spatial experience of virtual immersion (Henry & Furness) as military investigations have shown that intensified peripheral perceptions lead to sharpened psycho-motor reactions in human beings and hence to a more comprehensive cognisance of their rapport with their total surroundings. (Psootka, Davison & Lewis) It is salient that human

vision operates through a co-operation between the more conscious foveal area at the centre of the visual field (which takes in information concerning shape and pattern via an enormous amount of rapid eye movements (Carpenter)) in union with the surrounding, more unconscious, *peripheral retina* (which gathers atmospheric information on the *total scope of the space* one is within). (Rheingold, p. 207) The central fovea is made up entirely of cone photoreceptors and is the part of the eye that detects fine detail and is specialised for light adapted *photopic* viewing conditions. Although cones exist throughout the retina, they are by far most concentrated in the fovea. Foveal cones are specialised for finer acuity as each foveal cone has a dedicated channel to a ganglion cell and, as a result, does not have to share inputs with other receptors. This allows for small receptive fields, providing fine acuity. (Piantaneda, Boma & Gille)

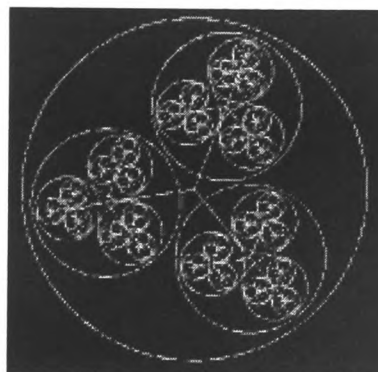


human iris

The peripheral retina is attentive to changes in the total environment, signalling to the foveal area where to focus within the entirety of space. (Rheingold, p. 207) This peripheral retina is populated mostly with rod-receptors, along with a small proportion of cones. Rods, though absent in the fovea, number approximately 120 million in the retina compared to about 6 million cones. Thus there are approximately 120 million sensors in the retina and only 6 million channels into the brain from the retina. (Youngblood, p. 46) Rods are specialised for viewing dim illuminations but do not code colour or fine detail. Rather, rod inputs link with neighbouring rod and cone inputs to one ganglion cell in a (more unconscious) process called *spatial summation*. (Piantaneda, Boma & Gille) Spatial summation results in larger receptive fields attentive to the space which "surrounds the body, is before and behind, past and future, where one is both seer and object seen." (Weiss, p. 34)

All that will be said concerning immersive perception, cognition, and interpretation will indirectly infer back to this atmospheric process called *spatial summation* with its process of understanding enlarged receptive fields. And in terms of this summative sense influencing an immersive cognitive-visuality, it is reasonable to make use of the *holonogic schematic model* of Arthur Koestler in that no set or frame of perceptions may be viewed in isolation or as a single part of a finite perceptual collection within a synthetic holonogic model. (Koestler, 1967, p. 48) This cognitive-visual model is applicable to immersive (unframed hence expanded)

visual intelligence in that, as the artist Carolee Schneemann has written, "Vision is not fact, but an aggregate of sensations". (Schneemann, 1968, p. 12) Victor Burgin supports Schneemann's claim when he writes that "seeing is not an activity divorced from the rest of consciousness; any account of visual art which is adequate to the facts of our actual experience must allow for the imbrication of the visual with other aspects of thought". (Burgin, p. 53) Thus an holonomic model of cognitive-vision would be appropriate when analyzing virtual immersion, in that when immersed inside the *mise en scène* of a *Virtual Environment* (VE), view-point/ego-center simultaneously implodes and explodes (and *vice versa*) as observation is deprived of its habitual perceptive boundaries. According to Koestler's *holon* concept (established in *Beyond Reductionism* and in *The Ghost in the Machine* (Koestler, 1967, pp. 45-58)) instead of cutting up immersive perceptual wholes into discrete focal parts, immersion should be scrutinized and understood using *synthetic sub-whole sets* found within the ambient atmospheric spectrum of immersive perception's entirety. It is the exposé of the *synthetic atmospheric phenomenology* of such holonertic sight (dependent on the *linked and amassed sum-total of views*) which will concern us here as even though our scopic information is largely determined by the way our eyes work horizontally implanted in the front of our face (cross-blending visual fields), our interpretations of that visual data are far from intractable. (Haber & Hershenson) We are equipped with eyes with dominant frontal properties which look straight on of course, but in holonomic cognitive-perception there is also aware attendant fringes to sight which seep in peripherally. (Cutting)



holonic schematic

Such an approach is consistent with, and indeed epitomises, the ideals of hermeneutics, as in hermeneutics the central notion is that we cannot grasp the meaning of a portion of a work until we understand the whole, even though one cannot understand the whole until one understands the parts which make it up. (Caputo, 1987) However, hermeneutics is not merely a paradox, since hermeneutics indicates that any feat of interpretation occurs through time, with adjustments and modifications being made to one's comprehension of both the parts and the whole in a circular manner, until some type of resolution is attained. (Gadamer, 1976)

Useful here also in grasping the workings of the holonomic/hermeneutic model is the influence of Aaron Gurwitsch and his *gestalt psychology* which was developed in order to formulate a phenomenology that recognised the relation of the dynamic field that encompasses both foreground and background perceptual moments to more rigorously define the nature of perception. (Koffka) Gestalt theory's precepts emphasise that the whole of anything is greater than its parts. Indeed it emphasises that the attributes of the whole of anything are not deducible from analysis of the parts in isolation. Instead gestalt studies make use of the methods of phenomenology, the description of direct psychological experience with no restrictions on what is permissible in the description. Gestalt psychology sought to encompass the qualities of form, meaning, and value that prevailing psychologists had either ignored or thought to fall outside the confines of science. (Horgan) Moreover, gestalt psychology emerged in part as an attempt to add a humanistic dimension to what was considered a barren approach to the scientific study of mental life. In the field of art theory, Ernst Hans Gombrich's conceptual involvement with gestalt ideas of vision (Kanizsa) is evidenced in his books *Art and Illusion: A Study in the Psychology of Pictorial Representation* and *The Image and the Eye: Further Studies in the Psychology of Pictorial Representation*; books which articulated the relativity of vision in terms of visual art.

h towards cognitive sight, as outlined above, would be in opposition to what Donald Lowe in his *History of Bourgeois Perception* identifies as the "bourgeois perceptual field" (Lowe, pp. 18-23); a visual mode which he characterizes as fundamentally "linear" (Lowe, p. 109), "nonreflexive" (Lowe, p. 26), and "objective" (Lowe, p. 18). In that our adult creativity derives primarily from our conspicuous potential for abstraction (which characterises our genus) and in our craving and manipulation of abstractions (Worringer), what is at stake here is the adult acceptance (or rejection) of our *entire atmospheric impressions* as our genuine optical-field of conscious creative interest; an abstract optical-field which calls on the retina's tremendous expansive qualities of which the descriptions of the scientist and the doctor have not done suitable justice. Early on in the 20th century Marcel Proust (1871-1922) in his masterpiece *Remembrance of Things Past*, links such a craving to sense and understand the entire field of atmospheric impressions (through intimate observations) with the compunction to penetrate exterior matter in order to understand the precision of the sensuality behind the aesthetic. (Proust) Still, this ephemeral aesthetic-vision has only been addressed by the rare visual artist, such as Wassily Kandinsky (1866-1944) when he spoke of this field's *felt scopic atmosphere* as a space's *stimmung*. (Kandinsky, p. 2)

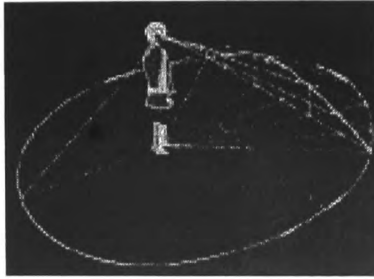
One way to better apprehend the ambient optical field's *felt scopic atmosphere* is to think of it in terms of a study of *cognitive-visual acoustics*. This is equitable in that sight itself is nothing other than a continuous pattern of perpetually changing light-data recorded on the retina which we humans process through the aggregated internal acts of discerning. To understand cognitive-vision as being non-inflected with subtle properties akin the acoustic properties of echo, range, pitch, timbre, and tone is to discern all visual moments

as being indiscriminately equal, and as flat. Cognitive-perceiving is continuously allocated by tones of recognition, ranges of totality, and distributed visual echoes as humans produce a full interpretation of the plethoric information which hits their retinas in order to assign it cultural meaning. (Brennan & Jay) More precisely, such an acoustic-like cognitive-visuality would involve the equivalent to what in acoustics is called *envelope*. Envelope, in musical sound, involves the onset, growth, and decay of a sound. Growth consists of the rate of increase of a sound to steady-state intensity. Duration refers to the steady-state of a sound at its maximum intensity, and decay is the rate at which it fades to silence. Envelope is an important element of *timbre*, the distinctive quality, or tone colour, of a sound. Every musical instrument has its characteristic attack, growth, duration, and decay pattern. My supposition is that so do aesthetic visual moments (but not in terms of time; in terms of peripheral spatial intelligence) when holonogically self-attended to.

By studying such an *envelope vision* in terms of immersion, in a sense this thesis participates in the recent investigations of visuality into what Martin Jay has called the "ocular character of all Western culture" and the "Cartesian perspectivalism that dominates the modern era" (Brennan & Jay, 1996, p. 31), a Cartesian perspectivalism which, according to Hal Foster, separates subject from object, "rendering the first transcendental and the second inert". (Foster, 1988, p. x) Such investigations include Guy Debord's critique of the Society of the Spectacle (Debord, 1983), Jacqueline Rose's investigation into the sexuality of the objectifying, male, patriarchal gaze (Rose), and Michel Foucault's (1926-1984) analysis of the panopticon paradigm. (Foucault, 1979) For example, according to Foucault the major effect of the panopticon (a circular prison designed by the British philosopher Jeremy Bentham (1748-1832) based on his principles of "happiness calculus") is to induce in the prison inmate (and by extension anyone) a state of consciousness that assures the automatic functioning of power. (Foucault, 1979, p. 201)

It must be remembered here that in philosophy synthetic statements are those statements judged to be true or false in relationship to the world (but which are not necessary ones), as opposed to analytical truths, which are necessary, and hence cannot be otherwise. In philosophy it is important to make this distinction between synthetic and analytical statements. Only when we acknowledge that this investigation partakes in synthetic activity might we enter the concept of *holonogic cognitive-vision* into consideration, and only if we understand holonogic cognitive-vision to be a synthetic *psychological thought-vision* without any one particular vector but rather a plethora of them united into one *void of the suppositional central vanishing-point which the horizon-line had previously established*.

The synthetic notion being pursued here then, is of an atmospheric and holonogic cognitive-vision constituted by what goes on in and behind the head as much as by what is in front of it.



Hence it is a synthetic cognitive-vision in accordance with Immanuel Kant's dictate that philosophy ought to investigate how we understand our world. (Lyotard, 1994) Tim McFadden in his text "Notes on the Structure of Cyberspace and the Ballistic Actors Model" in Michael Benedikt's *Cyberspace: The First Steps* (Benedikt, 1991, pp. 335-362) adapted the concept of the holon's ambiguous relationships in the early-1990s as a model for understanding the synthetic configuration of cyberspace in that holons, like cyberspace, have both synthetic cohesion and separateness as their structural elements. (McFadden) I find that the model holds true and is valuably useful in conceptualising the complexity of ambient immersive optics in virtuality. Christine Buci-Glucksmann recognised and termed this ubiquitous perspective the *Icarian gaze* in her book *The Cartographic Eye*. (Buci-Glucksmann) This notion as well compliments Roy Ascott's synthetic awareness of what he calls *cyberception*, as articulated in his essay "The Architecture of Cyberception". According to Ascott, "cyberception involves a convergence of conceptual and perceptual processes in which the connectivity of telematic networks plays a formative role." (Ascott, 1994)

Certainly it is true that hidden in us, and in connected computer space, there is something so large, so astounding, and so pregnant with the darkness of infinite space (Rucker, 1984) that it excites and frightens us and thus returns us to the experimental and to a state of stimulating desire and perceptual restlessness. But more specifically, how any one space *feels* is the aim of any immersive simulation, and the most complex discernment to gauge. When people commonly speak of "getting the feel" for a new place, I believe they are referring to their unconscious holonogic-visual analysis of said space, as any feeling of an environment is established by unconscious exchanges of immersive information. Unconscious particularly in art because there are clearly no objective mimetic values attributable to the felt qualities of art's space, for as Jane Harrison tells us in *Ancient Art and Ritual*, art is not mimesis (Bogue, 1991, pp. 77-78), but rather mimesis comes from art's emotional expressions. (Harrison, p. 21) Too, László Moholy-Nagy (1895-1946) points out that "every cultural period has its own conception of space, but it takes time for people consciously to realise it". (Moholy-Nagy, 1947, p. 56) We must additionally recognise that ideal immersive consciousness (the silk of the peripheral unconsciousness) takes place not only over time but within the emotional brain and that much of immersive consciousness is supra-sensible. Therefore it is appropriate that metaphysical (ideological) ideals in rapport with their externalisation in art will throw this dissertation through its entire trajectory.

Concerning virtual space, all that we consciously know is that cyberspace is a total abstraction (Pesce, Kennard & Parisi) which is constructed, in philosophical terms, as a *universality without totality*. (Lévy) Gilles Deleuze gives us a further explanation via the French author Marcel Proust in his book *Bergsonism* by defining the *virtual* as that which is "real without being actual, ideal without being abstract". (Deleuze, 1988, p. 96) Ensuing Deleuze, Pierre Lévy in *Becoming Virtual: Reality in the Digital Age* defines virtuality as a complex of trends, tendencies, constraints, goals and forces linked to a creative problem solving process. (Lévy) Brian Massumi, another Deleuzian in conspicuous agreement with Lévy, defines the virtual as a "pressing crowd of incipencies and tendencies" which produce "a realm of potential". But for Massumi the virtual is also "a lived paradox where what are normally opposites coexist, coalesce, and connect...". (Massumi, 1995, p. 91)

There is no physical protoplasmic body evident in VR's virtual space, merely an attention-vector that responds to spatial cues. (Balsamo) In this respect the virtual body conforms to the technical "inhuman" abstract body which Charles Wentinck describes as a body which has "no contact with the surrounding atmosphere". (Wentinck, p. 157) An immersant moves in virtual space by *shifting a felt interest* such that an impression of movement is conveyed. How our states of feeling and interest and consciousness are variegated by experiences within the total abstraction of cyberspace will be of prime interest as we look to see how abstract ideas and ideals impact upon the motivational theories and practical employment of artists in the past and now.

Section A. The Sensuous Being/Non-Being of Immersive Consciousness

Where there is simple information processing there is simple experience, and where there is complex information processing, there is complex experience.

-David Chalmers, *Facing up to the Problems of Consciousness*

Metaphor is most potent when the transferred schema effects a new and notable organisation rather than a mere relabeling of an old one.

-Nelson Goodman, *Languages of Art*

One no longer can specialise in a single discipline and hope truthfully to express a clear picture of its relationships in the environment.

-Gene Youngblood, *Expanded Cinema*

Immersive Ideals / Critical Distances is a Janus proposition inasmuch as Janus is the two-faced Roman God who faces both directions simultaneously. Janus is similar to the ancient Egyptian God Aker, a two human-headed deity who surveys the western and eastern gates of *duat* (the underworld). As Janus has eyes on both sides of his head, a Janus-like model would be able to see on every side in immersive/holonogic space. Hence he is the symbol for dehabitation, open-mindedness, and for taking an even-handed view, as Janus was able to look backward into the past as well as forward into the future. Moreover he represents a question that has two sides to it. The month of January is named after him.

The reason that I have chosen Janus as the guiding presence of this inquiry is that the one-directional explanatory mode of cause and effect does not fully pertain to my argument in *Immersive Ideals / Critical Distances* as I will not put forward arguments which purport to explain one phenomenon as the monolithic result of another in a one-to-one relationship. Rather I will put forward discursive suggestions, as is the province of culture. Moreover, in janusian thinking "opposites and antitheses are proposed as being *simultaneously* valid". (Rothenberg, p. 258) This appreciation of valid antithetical simultaneities shall be useful in reaching nonreductive synthetic conclusions concerning the whirr of information processing which takes place within an aesthetic immersive environment.

Janusian constructs integrate opposites and antitheses and in this respect differ greatly from typical dualistic thinking; the tendency to formulate concepts in terms of two exhaustive categories. Dualistic causality, bolstered by the seductive powers of linear narration (hence appearing clearer in terms of its authoritative explanatory closure) appears unsophisticated to me in the realm of culture. Indeed, particularly in the realm of culture, the *post hoc ergo propter hoc* (after this, therefore because of this) logical error of assumed causality is notoriously ticklish. Thus in order to author an explanatory yet non-reified investigation free from the deceptive certainties of conjectural cause and effect, and instrumentally place the emphasis on immersive capacity, I find it necessary to examine this immersive tendency from two directions at once: one direction

starting with an inquiry into the larger philosophical and technical concepts (what might be referred to as the metaphysics and technological ideology surrounding the details) (Section A); and from the other direction, through the examination of specific artistic events and details (Section B). This dual method will search for a dynamic equilibrium of equivalents, not a disanalogous mechanical cause and effect historicism, which often thwarts the radical newness of artistic enterprise in an effort to historicise and make what is radically new familiar and comfortable by placing art into a smooth, evolutionary continuum where vanguard art is made to seem to have evolved out of the past, thereby mitigating its newness by homogenising differences into a false perception of sameness. In this sense then, this study strives to be an addition to the developing field of cultural analysis through its multiform and interdisciplinary aesthetic approach to cultural immersive phenomena, located in a medley of media with a view towards exposing previously unarticulated immersive cultural promulgations and by re-emphasising immersive cultural promulgations that have atrophied.

AI: Theoretical and Linguistic Orientation Based in Extended Awareness

Perception is a nascent logos...

-Maurice Merleau-Ponty, *The Primacy of Perception*

It cannot be stressed too often that absolute value only arises from artistic, subconscious or superconscious creation.

-Kasimir Malevich, *The Non-Objective World*

The interpretation of emotional feelings and emotional understanding is the problem of art. Art anticipates psychic evolution and divines its future forms.

-Ouspensky, P. D., *Tertium Organum*

Virtual Reality (VR) is the name for the current suite of electronic applications that psychologically immerses one in a computer-generated polygonal Virtual Environment (VE) where a privileged stationary focal point is not generally circumscribed. (Burdea & Coiffet) As such it offers for reflection a rich variety of peripheral, psychological, philosophical, social and artistic issues for investigation and extrapolation.

The actual term *Virtual Reality* has been attributed to Jaron Lanier, a term he first used to describe the emergence of immersive, interactive simulations. By definition then, Virtual Reality entails a substantive mingling of movement and presentation in a dynamic continuum, hence it is an artistic devise rather different from the separation effected by the frame/proscenium's relationship to art, with which we are fully accustomed.

To date, the emergence of VR as a medium has occurred over the last thirty years or so. Ivan Sutherland, as early as 1965, set forth an explicit program for putting *humans in the centre of the information loop* in a speech to the members of the International Federation of Information Processing. (Rheingold, p. 38) Also in 1965, Sutherland described what he called *The Ultimate Display*, a display which included interactive graphics and force-feedback devices, as well as audio, smell and taste (Sutherland); and in 1966 Sutherland and his colleagues began research on a prototype of VR which was co-sponsored by the Advanced Research Projects Agency (ARPA) and the Office of Naval Research. In 1968 Sutherland published a paper which combined head-mounted displays and television-based technologies with computers which were programmed to track the viewer and updated a landscape graphic-display to correctly reflect new viewing positions. In 1968 Sutherland built a see-through helmet at the MIT Draper Lab in Cambridge using two displays which were visible from a pair of half-silvered mirrors, which provided the viewer with stereoscopic computer-graphic images overlaid onto the real world. In 1970 Sutherland moved to the University of Utah where he worked on vector-generated computer graphics and see-through technology. In his lab was Jim Clark, originator of Silicon Graphics, the company most associated with creating the puissant computers used in VR. Sutherland's work was subsequently extended into what we now think of as VR by Scott Foster, Scott

Fisher, Karl Sims, Thomas Furness, Jaron Lanier, Elizabeth Wenzel, Warren Robinett, Jim Clark, Don Vickers, Henry Fuchs, Fred Brooks, Dave Nagel, Alan Kay, John Walker, Eric Gullichsen, Susan Brennan, William and Meredith Bricken, Ann Marion, Michael Naimark, Brenda Laurel, and Steve Gans, among others. (Stone)



Ivan Sutherland's primitive 1970 HMD

The oxymoronic terminology of *Virtual Reality* is not without controversy. Zielinski thinks it now is recalcitrant "marketing jargon" (Hoekendijk, p. 7) while Michael Heim, though discontent with the term, believes it "sums up a century of technological innovation". (Heim, 1993, p. 124) MIT and NASA shun the term, preferring *Virtual Environment (VE)* and the VR Labs at the Universities of North Carolina and Washington use the term *virtual worlds*. It is for this reason of ambiguous non-conformity that I prefer to put forth my own phrase *synthetic-immersive-creation* in relationship to what has been habitually called Virtual Reality (especially for digitally mediated art which makes use of immersive synthetic spheres) as that term bypasses the question of verisimilitude in favour of a dialectical grasp of the interaction between immersion, synthesis, and creativity. Indeed Hegel's post-Kantian theory of dialectics in which opposing ideas are synthesised (Hegel, 1949) is a prominent feature of this understanding of VR immersion, an understanding which conceives of VR in terms closer to how Mark Pesce does; as *sensual computing*. (Pesce, 1994)

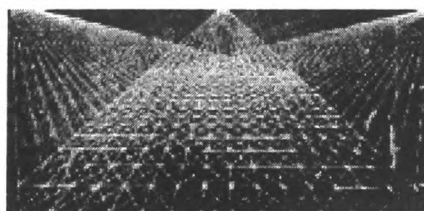
Synthetic-immersive-creations proceed from the orchestrated digitalisation of human sensory attributes and unifies and raises these particulars up to the level of a *general world*; hence it unites and interlocks previous sensual multiplicity into a synthesised creative totality. Such a process is consistent with the human ego, that aspect of the human biocomputer which Lilly identified as the "self-metaprogram" (Lilly, 1974, p. 139), an aspect which is particular and partial within its conscious totality. (Metzinger, p. 16)

Furthermore, what is *reality* (to my mind a particularly hackneyed, treacherous and marshy word)? (Hofmann, H.) Science has demonstrated that the term *reality* indicates no more than a perceived totality of

indeterminacy (Heisenberg) which is both the ground of all things and the very process of thought-perception itself. (Churchland, 1988) In this respect, the concept of *reality* already deserves the adjective *mythological*. (Barthes, 1993) In Roland Barthes' words, "myth is speech justified in excess". (Barthes, 1993, p. 130) But more than mythological, with its relatively singular connotation, reality unconditionally merits the adjective *polysemic*, a word which stems from the Greek phrase meaning *many signs*. Polysemic/mythological awareness of reality acknowledges the hypothetically infinite range of meanings in reality which result when determinacy is replaced by indeterminacy, an awareness which contradicts the verisimilitude thought to correspond to the assumed exactitude of naive naturalism. Indeed for Plato (427-348 BC) only ideals are real. (Barasch)

Maren Köpp in the 1996 Revue Virtuelle pamphlet publication entitled *Virtuality and Subjectivity* sums up the inquiry admirably for me in polysemic/mythological terms when he states that "reality itself emerges from an assembling of subjectivities in permanent evolution". (Knowbotic Research KR+cF, Köpp & Zielinski, p.1) However, for Michael Heim, reality is grounded in our ultimately finite constraint: death. (Heim, 1993)

But for most of the world *reality* is the perspective of the *logocentric apparatus* (Lefèbvre, p. 407) associated with *frontality* which we have inherited from the Renaissance, even though Samuel Edgerton makes clear that today we are the exhausted descendants of the engendering of linear perspective (the so-called rules that determine the relative size of objects on a flat plane) and that "the magic of perspective illusion is gone". (Edgerton, p. 4) Still, what makes a world convincingly real to most people is that it adheres to the horizon-based, preemptory, three-dimensional space of our accustomed actions; what is basically Euclid's (AD 3rd century) superannuated idea of space. (Martin)



However, recently this basic Euclidean conception of space has been expanded to include the formation of *many-dimensional space*. Here the Euclidean concept of space is modified by enlarging the number of vectors which may be constructed within it from three to some much larger number (which is designated as n). Mathematicians designate this space as *n-dimensional Euclidean space*. Such a space implies the existence of a higher-dimensional geometry that mimics Euclidean geometry. (Clarke, p. 231) There also, however, is another proposed spatial reality called *curved-space*, a span in which *curved space/time* exists. Curved-space is "approximately Euclidean over very small regions, but over large regions all geometrical properties (...)

break down". (Clarke, p. 232) Curvature is combined with Euclidean geometry with the increase of dimensions plotted. There are also a number of other generalised spaces which drop the Euclidean geometry completely, most notably the *topological space model* and *fuzzy space*; where there exists only a concept of nearness. (Zadeh) I won't go into detail here about each of these spatial concepts of reality, but merely mention them so as to indicate the problematic assumption that Euclidean geometrical space is the only "real" one.

Also we must remember that throughout time there have been *consensual realities* that have proven to be nothing but vast daydreams; such as the conviction that the earth was at the centre of the universe. This geocentric view of reality was replaced by the heliocentric model which, in turn, was replaced with that of an a-centric panorama. It was only as of 1615 that Galileo (1564-1642), following the hypothesis of Nicolas Copernicus (1473-1543), was denounced by the Holy Tribunal's Inquisition for holding as true the proposition that the earth moves circuitously about the sun. (Drake) His propositions concerning the relative stability of the sun, and the motion of the earth, were condemned by the Theological Qualifiers as follows: "The proposition that the sun is in the centre of the world and immovable from its place is absurd, philosophically false, and formally heretical; because it is expressly contrary to Holy Scriptures. The proposition that the earth is not the centre of the universe, nor immovable, but that it moves, with a diurnal action, is also absurd, philosophically false, and, theologically considered, at least erroneous in faith." (Catholic Encyclopedia)

Ideas of reality shifted again when Albert Einstein (1879-1955) and then Max Planck (1858-1947) understood light as consisting of waves as well as particles. In his general theory of relativity Einstein astonished the world when he said that space and time are not disconnected entities, but are smoothly connected and part of a larger immersive whole which he called *the space/time continuum*. This conception of the macrocosm immerses everything in a continuum, notwithstanding the apparent perceptible detachment of things and living beings. Counterintuitively, according to Einstein/Planck, everything is immersed within a seamless continuation of everything else, all blending into each other, even as things still contain their own particular qualities inside of the voluminous whole. Thus the mentality of contradiction was directly introduced into the West's previously ultra-rational Aristotelian view of reality, that theory-laden idealism which is called rationalism. Rationalist philosophy believes that knowledge is exclusively gained by the use of reason. (Damasio) As a result contradiction and paradox had been prohibited since Aristotelian times to make way for logical thinking in pursuit of the ideal of arriving at a rational mastering vision of the world, a proficiency proved through rational argument alone. In contrast to rationalist philosophy, much art of the 20th century, glancing at the post-Einsteinian indeterminate scientific model of the universe, has attempted to address this new *reality of contradiction*. Hence especially for the technological adaptation of art which utilises a double

notion called *Virtual Reality*, fresh notions of realism, materialism and idealism need to be examined (realism and materialism traditionally stand in an opposing relationship to idealism).

Moreover certain ideas and representations of *reality* today may not be the representational ideas of reality in a following era. (Putnam) This assertion has been indirectly advanced by the American philosopher Paul Feyerabend in that Feyerabend holds that the superiority of the modern scientific method should not be assumed. Feyerabend argues that what will count as knowledge in the future may have paradigms we cannot yet know and that we should not attempt to forbid future intellectual enterprises by attempting to define one dominant paradigm of knowledge. (Stewart, p. 93) One may even take currently idealised (theory-bound) situations as the real (as perhaps they almost inevitably are if we don't question them) and idealise them into the real. (Boyce) The Austrian philosopher Karl Popper (1902-1994) makes this point by being critical of the empiricist view that holds that we can objectively observe the world. Empiricism, as upheld by the English philosopher John Locke (1632-1704), is the belief that all knowledge comes from experience of the human senses, and not through rational induction. Empiricism was advanced by the French philosopher Denis Diderot (1713-1784) by collapsing it into rationalism during the Enlightenment. In his critique of empiricism, Popper argued that all observation is from one point of view (from which we induce generalisations) and hence coloured by that point's pre-given theory-laden assumptions. Popper supports this assertion by extending the argument of the Scottish empiricist philosopher David Hume (1711-1776) when Hume himself criticised the inductive scientific method as logically flawed. Hume maintained that all induction is partial (we cannot observe the universe in all places at all times) and hence inductive conclusions are not justified, even though we make them continually.

This confusion between the real and the ideal was furthered by the French film theorist André Bazin's (1918-1958) 1946 essay "The Myth of Total Cinema" where he perceptively introduced into theory the concept of *cinematic idealism*. Bazin identified this ideal as an *ideal realism*, notions usually at odds with each other. (Bazin, A.) On reflection one sees that they are not at odds and are in fact intermingled concepts applicable to far more than the cinema. Having been left in isolation, these concepts took on overly simplistic assumptions which no longer function to my mind.

Furthermore one might immediately ask just how convincing does a fabricated, implied representation have to be before it is considered "real"? (Putnam) The short answer is that it depends on the suggestibility (consciousness) of the immersant (McLellan) because the immersive feeling is expressed not only in the structure of a work but is correspondingly located within the psychological effect the work invites in the recipient. Indeed, this psychological effect will forge the principle parameters used to formulate this study's explanatory account in its development of an extensive theory of immersive consciousness within immersive culture.

Still the basic understanding of VR (from which this study proceeds) is that Virtual Reality is a computer-generated simulation of a *world* (Heim, 1998, pp. 89-90), a world (like the non-simulated one) which is both immersive and interactive. A *world*, in Heim's terms, is "a total environment for human involvement". (Heim, 1998, p. 222)

Ultimately, for me though, realism (especially in terms of virtuality) is just a non-signifying point of view (Rotman, p. 19), a constructed chronicle for the artist to employ or disregard at will. This stance conforms to the American philosopher Richard Rorty's argument that because the mind is constantly interpreting reality through different paradigms, the mind does not simply reflect the real world but rather inevitably distorts it. (Rorty)

In art, even a form of negation like *anti-art* (Richter) functions finally as a way of opening up our capacity for plurality (Eco, 1989) and expands what has heretofore been accepted as real. (Koyre) Hence the only consistent non-expansive definition of the term *reality* that works for me is the *irreversibility of time*. And it is here that I find the fullest agreement with Michael Heim's definition of reality, as it is true that death clearly conditions our sense of boundaries. Our prospects for an everlasting life are not so drastically different than they have ever been. This is not to say that we don't attempt imaginatively to supplant our fate and, indeed, it is just such lavish, bodiless desires for being as depicted in art which I will use as an intermittent theme in this study.

Also, however, art's sense of reality is intrinsically moulded by the psychology behind the technology involved in its production. (Malraux) But here we might consider Humphry Osmond and Bernard Aaronson's broad definition of technology as "the entire set of devices, whether mechanical, chemical, or linguistic, by which adaptations of individuals to their environments are enhanced." (Osmond & Aaronson, p. 1) Since VR's virtual immersion depends somewhat on the sanguine vividness of its display, its technical/psychological factors are closely related to the devices that lead to deferential notions of *realism in terms of representational convention*. (Larjani) Indeed a commonly expressed critique of VR worlds is that VEs often only plunge the immersant back into a "realistic" Renaissance-type perspectivism, and therefore, from the outlook of 20th century abstractionism, should be considered regressive. (Manovich, 1996) Certainly those who look only for realistic depiction in VEs (and there are many inasmuch as VR emerged from the electronic military-entertainment complex (Levidow & Robins)) overlook abstractionist art historical dimensions in favour of antiquated notions of essential copy, superficial verisimilitude, and recognisable order. (Baudrillard, 1983a) More the pity, as rather than with recognitions, one is apt to be more delighted and rewarded in VEs with an *unrealistic* sense of weightlessness, *unrealistic* sensations of vastness, feelings of transcendence of the mortal body and the gravity of earth, and by the *unrealistic* exciting ability to pass

through walls, objects and bodies as if one were a sheer phantom. Yet certainly virtual immersion is the cognitive conviction (consciousness) that one is located inside the atmospheric spatial framework of a display, and this sense of recognition/conviction is some sort of inner *haptic realism* (haptics is the generation of dynamic feedback information). (Carterette & Friedman)

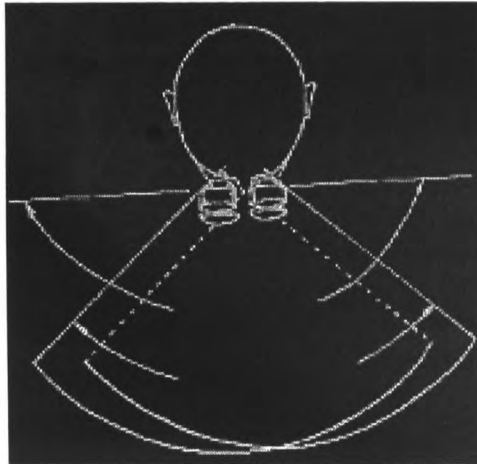
Consequently issues of haptic realism and regressive realistic representation are more pertinent to the understanding of VR than uncritical notions of reality. I expect expanded notions of reality may however emerge out of a VR-art junction, as an expanding of the boundaries of reality (Koyre) have already inscribed 20th century art profoundly, as will be demonstrated. But even if the technical drive for "realistic" high-definition reproduction perseveres in the mainstream, it will be a long time (if ever) before we could awake inside a VE and be unable to tell that it was a faux actuality. At present there is the misfortune of sacrificing high-rendering *trompe l'oeil* detail for the speed needed to allow immersants to move their viewpoint throughout a world *in real time* (within one/tenth of a second; or that which is perceived as simultaneity). However for the sake of convention and understandability I will retain the common use of the phrase *Virtual Reality* if it means any cultural media where one is completely immersed in the data, where one feels transported to another sphere (and not just looking at one). (Bletter) Nevertheless, for the sake of discussion, the reader will, I hope, consider my somewhat more precise and formal redefinition of VR as synthetic-immersive-creation at encounters with the phrase VR and with the experiences this phrase refers to, for even the word *virtual* is defined as that which is being so in effect, although not in actual fact. (Lévy)

But regardless of what term is employed, what is evident to me is that with synthetic-immersive-creation we are embarking on a new precursoral phase of artistic awareness in which *total immersive involvement* is the primary characteristic. Everything examined here: the prehistoric painted cave, ornamentation, the history of the garden grotto, ancient fresco murals, embellished copulas and crypts, ocular panoramas, baroque niches, vanguard artistic experiments, spacious IMAX screens, and VEs *all share the connected sense of striving to attain the para-optical ideal of total-immersive presence by filling and appeasing peripheral vision and accommodating its fullest capacity in terms of spatial summation.*

Total-immersive presence (or what is called by some *telepresence*) in a VE is dependent on the versatility of that system's interface in allowing the immersant to create (through the suspension of disbelief) their own *mental sense of self-recognised placement within the faux orb.* (Barfield & Weghorst) Scott Fisher, founder of the Virtual Environment Workstation Project at NASA's Ames Research Centre, defines this occurrence as "the sense of being physically present in a remote or synthesised environment"; a sense which is "preconditioned" by "sensory immersion". (Fisher, p. 4) Jonathan Steuer, author of the essay "Defining Virtual Reality: Dimensions Determining Telepresence", defines telepresence thus: "telepresence is the extent to which one feels present in a mediated environment (...) this (mediated environment) can be either a

temporally or spatially distant real environment (...) or an animated but non-existent virtual world synthesised by computer". (Steuer, p. 76) This understanding of presence in the virtual insists upon *an operative feeling*; moreover, an operative feeling towards something that is not, most likely, fully visible. (Robinett, 1992) However *instrumental in effectuating total-immersion in a synthetic-immersive-creation is a large field-of-view* (FOV), interactivity, fast update-rate, stereoscopic image complexity and three-dimensional spatial audio input. (Pimentel & Teixeira, p. 105) There is also the far more complex task of analysing perceptual psychology and cognitive factors in understanding the quality of immersion experienced; hence a holistic technique is unavoidable inasmuch as the experience of immersion is *more than just the mere sum of its parts*. As such, it can be plausibly argued that the basis for immersive consciousness; total-immersion where the sense of self and environment are experienced as co-present and concurrent in an ambiguous experience of merger, can be described in terms of the previously mentioned fuzzy set theory. (Zadeh) This total-immersive "degenerate sense of space" (Clarke, p. 234) is fuzzy because there are various criteria for total-immersion which can be satisfied to varying degrees. *Total-immersion is a gradational value*.

Generally speaking however, immersive adjustment to a virtual space involves the paradoxical combination of imagination within self-imposed restrictions. More specifically, it is consequential to appreciate that there are many differences in how people feel and respond to this inherent paradox within an immersive virtual space. For example in their research paper "Cognitive Factors Associated with Immersion in Virtual Environments", Dr. Joseph Psootka and Sharon Davison, in association with the U. S. Army Research Institute and the Catholic University, report that immersion is affected greatly by how claustrophobic the immersed subject is. The more claustrophobic the subject of immersion is, the less often they felt objects were still there when they turned their back on them and the more nauseous they felt. (Psootka & Davison) On the other hand a person's *feeling of belonging* helps ensure an immersive experience of quality and fend off simulator sickness (ranging in degree from feelings of unpleasantness, disorientation, and headaches to nausea and vomiting) generally do to *cue conflict* caused when the body tries to interpret conflicting clues being received by the senses. (Latham) This unpleasantness is referred to as *alternate world disorder*, a term which covers the complete range of displeasures, from mild headaches and disorientation to gnarly nausea.



FOV range(s)

Verily, immersion in a VE for many people is accompanied by mild alternate world disorder similar to motion sickness. 60 to 80% of subjects report such symptoms during and after immersion. (Ramsey) However research has determined that alternate world disorder is hardly ever felt with a field-of-view of less than 60 degrees (Howlett) and this is understandable when we consider other reports that find that immersion is only experienced when the FOV is greater than 60°. The results of the study "Effects of Field of View on Judgments of Self-Location" conducted by Dr. Psootka and Sonya Lewis under the auspices of the Research and Advanced Concepts Office at the U.S. Army Research Institute for the Behavioral and Social Sciences, indicate that self-location in a VE is substantially affected by the display's FOV. (Psootka & Lewis) Tested narrow fields of view, often about half the *normal FOV of 180 degrees*, led to distortions of the perceived space. (Psootka, Davison & Lewis) Multiple studies have shown that all subjects reported some level of initial unpleasantness on entering a wide FOV VE as subjects experienced elevated heart-rates in all extensive FOV VEs tested, *before, during and after* immersion. The surprising *before* aspect is particularly reminiscent of what Giorgio de Chirico (1888-1978) said concerning ominous feelings of something about to happen as being a characteristic of what he called *metaphysical art*. (de Chirico) At any rate, adrenaline levels were elevated in all subjects and salivary-cortisol levels were found to increase in response to spacious FOV immersions. Analysis of catecholamines and cortisol in urine revealed greater elevations in levels of adrenaline due to wide FOV immersion and heart-rates were found to be higher during and after such FOV immersions. Due to this research it is now accepted that high levels of circulating estrogen results in an enhanced susceptibility to alternate world disorder. Women in early stages of pregnancy who are carrying female babies are most susceptible to all manner of forms of alternate world disorder. (Ramsey)

In most cases, however, a full recovery of the normal state of bodily functions is achieved within 10 to 25 minutes after coming out of the immersion. Using a variety of questionnaires and interviews, subjects

generally report a high level of delight independent of any adverse alternate world disorder effects experienced. (Ramsey)

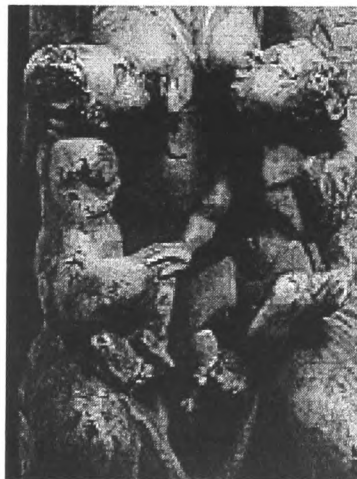
Total-immersion seems to be facilitated by the ability to control attention and concentrate on the VE to the exclusion of the real world. (Barfield & Weghorst) When immersed in a VE the immersant receives stimuli from three sources concurrently: the virtual space created by computer-generated cues, physical body cues, and complex internal input from the conscious and unconscious mind. VE's spatial cues are determined by a computer which is capable of storing and manipulating groups of numbers represented in binary form. (Braun) It can perform mathematical operations on these numbers and it can send and receive these numbers to and from various peripheral devices such as disk-drives, head-mounted displays (HMDs), navigational interfaces and modems. People's psychological responses to the computer's output however are far more complicated and indeterminate, as we have already seen. Given virtual immersion's operational three-fold dynamic and when we take into consideration the range of bodily and mental/emotional responses which are evoked, the ensuing assumption which I shall plunge into here is that the variable cognitive aspects and bodily responses engaged in effectuating total-immersion *inevitably modifies human consciousness*, at least temporarily.



an HMD

Immersed in a VE, the ontological distinctions between space and protoplasmic body commingle. Herein the immersant becomes an invisible algorithmic phantom extant by virtue of the electronic umbilical cord which transverses the dark frontier between the virtual and the vital. As total-immersion depends on the highest degree of consonance felt between the location of one's sense of unified conscious self (*egocenter*) (Newell) and space, it is my self-observation that the space of immersion involves not the mind alone, not the ganglion solely, but rather the solar plexus, the core of our dynamic unconsciousness and our sympathetic centre. This is relevant in that it has been shown that the essential precondition for understanding immersive VR is understanding the spatial representational systems that localise our *egocenter* within a virtual territory.

(Franklin, Tversky & Coon) The location of one's egocenter in virtual space is of critical importance for immersion technology to work (Latham) and as such it forces us to reconsider the pre-ego state of the womb's buoyant darkness (commingling space and body) and the elemental pre-ego enchantment linked to suckling breast milk; what I consider the plexus, nexus and sexus of VR, in acknowledgement of Henry Miller's (1891-1980) work in this field of sensuality. Deep sensuality is relevant to the realm of VR as VR's basic first step is the disconnection of rationalised vision (Ivins, 1975) from the world. VR's HMDs first cut vision off from the customary biosphere. In a way this cutting off of vision in the creation of a supplementary virtual space reminds us of the Greek space of the *temenos*: the *place cut off from the common land* which is dedicated to the sacrosanct realm of the Gods and/or Goddesses. Indeed total-immersion in a synthetic-immersive-creation sometimes feels like one is floating in some sort of sacrosanct, womb-like, oceanic unity. By the phrase *oceanic unity* I am referring to Adrian Stokes' (1902-1972) use of this term in his own voluminous art writings which were influenced by psychoanalytical criticism. It is characteristic, Stokes argues, for both artist and audience to have emotional deficits which can only be gratified by a replacement for the maternal breast (Stokes), which once gave generalised feelings of satisfaction, security, and comfort to the relatively unindividualised oceanic infant (Spitz) in the visual form of an exceeding of the FOV. Though not mentally directed, but surely directed, impelled from the dark primal unconscious ego-centre in the solar plexus, the new-born infant seeks out a nexus with the breast by opening a semi-blind mouth and groping through non-Euclidean space for the extenuated nipple. My hypothesis is that the function and affect of immersive art is compensatory in similar ways.



fragment from a gothic carving

In that the mature VE immersant positions her or his ego-centre within an emotional (Massumi equates emotion with subjective "qualified intensity" (Massumi, 1995, p. 87)) hypothetical (non-physical) vibratory space, VE immersion touches on two of the great motivational forces in human life: sex and metaphysics. And this is as it should be when discussing the aesthetic dimensions of synthetic-immersive-creation and art

and how they modify human consciousness, for according to Sigmund Freud, metaphysical symbols and sexuality have a specifically close relationship. (Freud, 1952, p. 149) Hence we must keep in mind the close relationship between the metaphysical, the immersive, and the coital, for as Claus Oldenburg says, "the erotic (or the sexual) is the root of art, and its first impulse". (Oldenburg & Williams, p. 15)

Indeed when we realise that immersive space is not solely technologically visible and sensorial but emotional, sensual, and psychological (given our various levels of excitement in it) the relationship which it holds to our imagination deepens considerably. Verily it is inherently psychologically emotional in that total-immersion is a psychologically perceived unity between the ego-self and the womb-like proprioceptive VE. (Psootka & Davison, 1995) An immersant, once positioned inside of the necessary sensory input epidermis, appears to be, and is indeed, lost to the non-digital world and hence enters into a hypothetical state of reduced and regressive consciousness. This disconnection into darkness dissolves mature consciousness and plunges the immersant down into her or his intricate psyche which contains premature subliminal emotional impressions. In this desirous darkness an immersant may enter into concourse with profound feelings of connectedness to an abstract milky ocean of oneness. According to Greenberg and Mitchell, a new-born child's mental life is full of such emotions concerning the mother's milk and her insides and that the child's first desire is to merge with all of the riches imagined in the mother's breasts and womb, including food, fecundity, and the father's penis. (Greenberg & Mitchell, pp. 124-125) From this desirous axis of the solar plexus (roughly the site of the detached umbilical cord) the new-born is drawn emotionally towards the breasts to re-establish the lost anterior oneness of the womb, almost like an electro-magnetic force flows in a circuit between the nerve-centre of the mother's nipples and the sucking mouth. Yet there is also a conspicuously widening gap between the mouth (the enlarging ego-centre) and the breasts and these two ego-hubs toggle back and forth as in an oscillating quiver. (Prose)

By contrast to these psychological operations, my general technical understanding of synthetic-immersive-creation is that it refers to an immersive and interactive experience generated by computer where a stored numeric data-field is displayed as apparent spaces and objects (generally) within the system's global illusionistic co-ordinates via polygons. (Ellis) The *polygon* is a surface made up of three vertices, like a triangle; the greater the complexity of the model, the higher the polygon count. Small computers can render models made up of only a few polygons many times per second, whereas faster ones can render millions of polygons per second. (For example the computer at the Human Interface Technology Lab at the University of Washington (HIT Lab) is a Silicon Graphics 320 VGX workstation which is rated at 1,000,000 polygons per second.)

Such systems of technology of course focus attention on certain kinds of relationships and particular ways of conceptualising those relationships. (Osmond & Aaronson) Digital/electronic VR technology atomises and

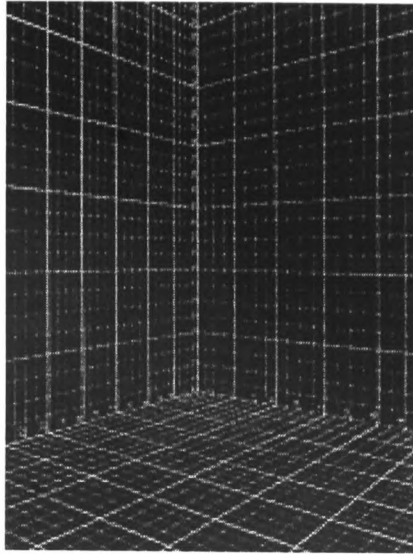
abstractly schematises the analogic quality of experience into distinct numeric bits of information that are then transmitted serially into a total unifying system of pixel/polygonal presentations. "Total" because everything in it is based on numbers and on the logical systematic relationship between numbers. Hence this schema is always already *ipso facto* a coherent and highly consistent entity (as strings of computer code) (Braun), however incomplete from other points of view. (Manovich, 1996) Regardless, stored numeric information becomes roused to the level of illusion by moving numbers in and out of storage and effecting complicated calculations upon them. (Pimentel & Texeira, p. 11)

A virtual environment is immersive if the simulation is deemed *total* (or complete enough) for immersants to get the impression that they have been altogether transported into that proposed space. As Howard Rheingold recounts in his book *Virtual Reality*, on donning his first head-mounted display (HMD) in 1988 at NASA/Ames Research Centre in Mountain View, California, "cyberspace was everywhere I looked, above me, below me, behind me. I wasn't just watching it. I was *in* it." (Rheingold, p. 133) Rather he should have said that it was *as if* he was in it. In VR, immersive virtuality is the reading of spatial indicators (or lack thereof) by the immersant who considers them *as if* they indicated dimensions of actual space. Commonly one sees/feels this *as if* transparency by wearing an HMD which permits the immersant to perceive an encircling optic simulation, painted electronically, that surrounds vision in apparent three-dimensions. In using the term simulation, which we will continue to use in its broad sense, it is worth noting here that its Latin root word *simile* means *as if*. Hence when we use the word we are speaking of something which is setting up an analogy and creating an equivalent trope. What is fascinating is that this root Latin word *simile* is derived from the older Indo-Germanic word *semilis* which means unity or the forming of a unity. And indeed a unity between the immersant and the *as if* scene is formed in total-immersion, in that as one moves one's head to look around the simulated scene it is instantaneously repainted in such a way that an illusion is created of the scene standing still while the immersant seems to be moving about. Those are the basic technological facts as related to vision. There is more to it than that, however, when one ponders these facts psychologically.



another HMD

According to Zielinski, the virtual "fulfils the function of consciousness" (Hoekendijk, p. 8), but to do so convincingly requires that body movements (such as turning of the head) elicit the system to reply in a way akin to our sensations in the non-artificial world. Total-immersive VR is a reificational technology then which allows the user to implausibly move through the computer screen into a three-dimensional artificial world (Negrotti) in that *reification* means to treat abstractions as though they were real. However, reified abstractions can be enriching affairs, and the move from experience to concept to theory is often necessary to understand their essential characteristics, which in VR's case means that its space is - if not constrained and limited by its programmed attributes - conceived of as a continuous and homogenous 360° vacuum. (Knuth) In unconstrained immersive holonomic cognitive-vision there are no oblique vanishing-points, hence immersive holonomic cognitive-vision is synthetic ambient-macroperceptual because the peripheral expression of space it reveals is a synthetic occurrence which is not reducible to the natural limitations of the eyes. (Robinett, 1991) This is evident when we think of visual summation in terms of abstract space, in that abstract space is ordinarily conceived of as a continuous and homogenous void. And this is as it should be, for as Samuel Edgerton makes clear "linear perspective has been part and parcel of psyche and civilisation for too many centuries". (Edgerton, p. 4)



linear perspective schematic drawing

As the eyes navigate artistically-mediated immersive space, the path of their cross-blended drift is irregular and intermittent as nothing may be entirely taken in at a glance. In the sense that immersive holonomic cognitive-vision is the sum of a collection of spatial inferences, artistically-mediated immersive space offers the immersant an experiential range comparable to random access memory, which may or must undergo continual reconfigurations. While artistically-mediated immersion looks through the computer-generated electronic material component of the computer world into the synthetic modelled orb and experiences this environment as if from within the inside, interactivity exploits the formal materiality of the medium. Interactivity in synthetic-immersive applications is not solely the capability of navigating the VE, but is the capacity of the user to perform alterations in that environment. (Larijani) Moving the sensors and enjoying freedom of movement do not in themselves ensure an interactive alliance between a user and an environment however, even if the user derives sufficient satisfaction from the exploration of the surrounding domain which is intended to "engulf". (Heim, 1993, p. 126). Full interactivity entails unrestricted movement at will within the Virtual Environment, but also, most importantly, when actions taken within the VE create momentarily enduring consequences. (Ryan)

According to Jonathan Steuer, interactivity transparency requires dynamic simulations which utilise the tropes of *speed* (rate at which input can be assimilated), *range* (the number of possibilities for action at any given time), and *mapping* (the ability of a system to map its changes in the mediated environment. (Steuer, p. 86) The most important criterion is the speed of the update rate at which computers render the VE, the speed with which the computer can calculate and render each new views and positions. Seven frames per second is an important threshold, below which the intervention of conscious awareness is often inevitable. However, the performance of speed, I have noticed, works in both directions; as immersants generally adjust themselves

down to a slower pace in their bodily motion than in the outside world, as swift movements can often create a feeling of queasiness and vertiginous unease.

In Virtual Environments immersion and interactivity do not usually operate in contention even though immersion may propose an intermittent intimidation to interactivity, but the converse does not hold true. The more interactive a Virtual Environment, the more ontologically immersive the experience. (Ryan) Thus there is nothing intrinsically incompatible between immersion and interactivity. Just as in real life the greater our autonomy, the more we feel a nexus with our milieu and hence our ego-centred ontology. As we know, ontology is a branch of philosophy concerned with what positively exists (actuality) as opposed to what appears to exist but does not (virtuality). As such ontology is the study of *being*, the most general concept imaginable. Everything that the world *is* may be said to fall under this most totalising of concepts. (Sartre, 1968) In modern ontology there was a significant shift in the way we understand *being* and pursue ontology through the fragmentation of previously integrated being (Heidegger, 1962) and more recent post-modern theories of reintegration of being through digital means have arisen. (Negroponte)

Immersive ontology, where the immersant is integrated within the transparency of space and thus selfhood is experienced as abstract capacity rather than existential identity, though not by any means an exclusive dominion of algorithmic VR (as my dissertation will show) is the leitmotif of VR, in my estimation. And as such *total-immersion epitomises the current ideal conception of being in cyberspace*. By *cyberspace* I refer not only to VE space but to the globally networked computer-generated informational realm (Benedikt) of which VE space is but a part; the sum-total of data-space (Walser) which constructs the entire shared matrix of all the world's networked computers. (Gibson, 1984) In total-cyberspace, onto which every connected computer is an entrance, geographical distance and audience appeal are irrelevant. (Benedikt) This total-informational space is the sum-total of digitised symbolic information, potentially the bulk of which constitutes the human intellectual/artistic enterprise; an enterprise which re-constructs what Robert Abbott calls "the world as information". (Abbott)

Salient here is that the function of the symbol is to (supposedly) intellectually transposition people momentarily to other realms of reality. Indeed one prime aspect of any ideology is its ability to relocate consciousness into an imagined world which allows a new means of constructing identity. (Larrain) The American philosopher Henry David Aiken distinguished one of the primary meanings of the word *ideology* (a word coined by the French empirical philosopher Destutt de Tracy (1754-1836)) as being an "ideal or abstract speculation" concerning "visionary theorising". (Aiken, p. 13) Massumi, however, defines it also as a "structure of belief" and in a cultural-theoretical way as "an interpellative subject positioning". (Massumi, 1995, p. 108) Thus we must always remember that the virtual is not ontologically "real", but rather a stimulating epistemological synthesis which involves ideal visionary theorising. From a philosophical point

of view, such an epistemological synthesis is the operation by which *isolated elements are built up into a united whole of an ideal system* so that the outcome is something more than an unalloyed totality of disconnected factors. (Godin) This visionary formulation is familiar with respect to the fantastical aspects projected into the qualities of an idealised situation (as we know from many kinds of antediluvian religious metaphysics and their artistic transcendental expressions) but it is certainly dissimilar through the connectivity of the Internet and with synthetic-immersive-creation's technical ability to construct shared electronic immersive environments. Hence my working hypothesis on beginning this research into immersion, was that there have always been rapturous ideas of virtual immersion and disembodied experiences (Levin, M. D., 1985) encouraged by enclosing situations, where imaginative approaches have been aesthetically formulated to allow entry into anomalous ideal worlds (unchoked by quotidian concerns) accessible only through the symbolic imagination, and in some cases these models have been given ontological privilege. This dissertation set out to see how contemporary concepts and ideologies of virtual immersion relate to such pre-existing systems of thought, (as expressed in art) as they have expanded out of the human imagination and manifested themselves in the development and understanding of technological goals. (Roszak) Of prime concern is the ontological question of *subject/object* awareness and it is here that a dynamic reflection upon immersive implications must begin and end.

Recent contemporary thought has been concerned with the deliberation on the notion of the subject in order to question its traditionally privileged epistemological status. Epistemology is the study of what we can possibly know, the branch of philosophy concerned with how an observer may know, not with what is known thereby. Epistemology seeks to understand the origin, processes and limitations of observation including such operations as drawing distinctions, establishing relations, creating constructs and all the consequences for knowledge which result from communications between an observer and the observed and within a community of observers who may observe each other. (The Internet Encyclopedia of Philosophy) As such, it is highly relevant to the building of an immersive theory of art, as the epistemology of a theory considers the observer and the observed as parts of the same system and theory as an emergent property of the interaction process.

Relevant here is that under recent epistemological scrutiny which Jacques Derrida has described as *logocentrism*: the once held distinctions between subjectivity and objectivity. (Carroll, 1987) Today these logocentric distinctions are breaking down under the pressure of immersive technologies. By identifying an individual's hyper-real presence (*hyper* means extended (Heim, 1998, p. 214)) in a vaporously technologically stored set of bits (Mitchell, W. J.), the modernist existential concept of the logocentric individual (Sartre, 1968) has been supplanted by the fabulated electronically produced simulacrum-persona. This quality of phantasmagorical replacement has formulated a new understanding of phallocratic existence which Gilles Deleuze and Félix Guattari have called *schizoid*. According to them, *being* is now inseparable from a

technologically hallucinogenic/schizoid culture. (Deleuze & Guattari, 1987) With telematic connectivity (Ascott, 1994) this understanding of consciousness has become central to post-industrial hallucinogenic/schizoid society and now supplies this society with a rich metaphorical tool with which to understand itself in that the domain of the metaphor is constituted by an "unstable distinction between the literal and the figurative". (Culler, p. 207) In our current wired age, given our heightened condition of maximising data-flow, once fixed logocentric identities based on Euclidean spatial distinctions (McGinn, p. 229) are being transposed by malleable computational immersive configurations of self-awareness (Pylyshyn, 1988, pp. 210-211) as the borders of the conventional logocentric object/subject relationship computationally bleed (Kelly) within electronic immersive consciousness. Hence electronic immersion (with its insinuated inside-omni-everywhereness insight (Davies, 1997)) is becoming *the* pertinent concept for the recognition of being in hallucinogenic/schizoid culture. Thus within this dissertation I have found and accumulated aesthetic examples of non-logocentric immersive consciousness as detected within the histories of art and philosophy, so as to explore a set of deeper questions surrounding today's hallucinogenic/schizoid culture. In Section C I have synthesised these non-logocentric examples into an interconnected theoretical pattern by articulating their underlying principles of immersive significance. Such an account of immersive consciousness entailed more than mapping the characteristics of the history of spatial configurations, or the construction of an elaborate genealogical tree however, as immersive consciousness - as related to art - presupposes the acceptance of component metaphysical non-logocentric root aspirations. Though we can never fully explicate methods to guarantee discernment and attitudes of critical receptivity, the intent of my research is to set out to *define the unifying principles of immersion and trace these principles both backwards and forth* through these non-logocentric root aspirations. The intent is also to examine the diversity of immersive non-logocentric ideals in relationship to the various styles periodically expressing them which have been employed by artists sporadically, including, of course, the technologically acicular production of artistic synthetic-immersive-creation today.

Thus it is the principle of non-logocentric immersion as applied to culture which interests me, as I find electronically fabricated worlds only superficially connected to technological means and more properly concerned with *ideals of self-transcendence*. (Boller) To show this I will be exploring the insinuated claims to attention that VR makes today, by following those claims both forward into a projected future and backward into a complex unclear past. This will be done without hardening the resultant explanations into replacements for the effort to understand the examined relevant data. Such an approach should nevertheless lead us to reach thoughtful conclusions via critical methodology produced through the use of theoretical and historical interpretations which may challenge prior understandings even if we shall sometimes be forced to engage in the tentative weighing of alternative hypotheses without always reaching circumscribed conclusions.

Moreover this entire process takes place in an intellectual climate in which the very scope of art has itself been radically altered by becoming conceptually cross-disciplinary. So although I am constructing a dynamic paternity/maternity for synthetic-immersive-creation by connecting privileged immersive components of its simulacra technology into association with the histories of art and philosophy, it is not in an effort to legitimatise and thereby authenticate the uniqueness or the radicality of VR's technical achievements by placing it in any narrow biased category. This seems to be in agreement with Sigmund Freud, as he too thought that the boundaries which make up the various territories of art historical knowledge needed to be transcended by their relation to the depth of mythic representation. (Freud, 1958)

Such an emergent reconception of art within which phenomenological problems of consciousness are foregrounded (a process which Clarke cites as "the exploration of mind from within" (Clarke, p. 233)) go far in attempting to develop immersive concepts owing to art's rhetorical manipulation of analogous spatial tropes, such as the prevalent use of spatial metaphors. When one takes an interpretative metaphorical view of art broader than the typical, somewhat fatuous, materialist/reductive explanations one soon detects that the concept of art itself is an *open concept*. The concept of art itself is *pantheistic*. But in my use of the term (based on my activities as an artist) I understand art to be fundamentally *an extravagant activity expressing in a symbolic language the desire for joy*. For me, philosophy is a method of understanding and technology a method of doing art. I should establish that the pantheistic definition of art which I am upholding here, and which I find requires reiteration as artists move increasingly from organic materials to the use of electronic and synthetic ones, is basically that supplied by Susanne Langer in her book *Feeling and Form* where she determines that "art is the creation of forms symbolic of human feeling". (Langer, 1953, p. 40) Furthermore, in answering the question of how art feels, Ms. Langer proposed that the symbolic space created in painting was not real but *virtual*. According to Michael Fried this ideal of virtual felt space seems to have been a motivational source of energy for the painter Gustave Courbet (1819-1877), as Fried says that Courbet repeatedly attempted "to transpose himself bodily into the painting" and that Courbet imagined himself "entering the picture physically and moving around in it." (Fried, p. 4)



Gustave Courbet, *The Origin of the World*

Also supporting my own definition of art is Jane Harrison's point that art is sublimated sacred/sexual ecstatic ritual. (Harrison, p. 123) By extension, art, by my broad definition, creates a sublimated image of the sacred/sexual world in which a system of functional signs play a less important role than the *embodiment of joyful feeling*. In this sense my definition of art follows both Clarke's definition (following ideas presented in Alexander's book *Space, Time, Deity* from 1920) of our mental space as being "enjoyed space" (as opposed to supposedly objective space, which in his terms is "contemplated space" (Clarke, p. 234)) and the general philosophy of utilitarianism as developed by Jeremy Bentham (and modified by the philosopher John Stuart Mill (1806-1873) (Mill, 1867)) which was principled on the judgement of actions according to the degree of the amount of pleasure they produced. (Stewart, p. 81) However the necessary inexactness of emotional sacred/sexual enjoyed states requires creations which *suggest* more than they directly say. Creations which call forth this suggestiveness of the complexity and instability of human feelings of enjoyment is what Ms. Langer calls a *symbol* or "any devise whereby we are enabled to make an abstraction". (Langer, 1953, p. 11) The artist's work then, which falls well outside of any considerations of technique, electronic or otherwise, is the creation of *unfamiliar emotive abstractions of enjoyment (abstractions of enjoyable space)*. The significant cognisant value of abstract artistic symbols is that they may confer flickering ideas which exceed the interpretant's former understandings with unaccustomed emotive possibilities and scintillating expressive values which may be characteristic of even deeper inner pathos and jubilant non-logocentric unfamiliarities. And this is as it should be, for the technique of art is to make our understanding of both perception (Rock, 1984) and history (de Landa, 1997) at first unfamiliar, particularly when attempting to increase our comprehension of, and neurological feeling for, data-space and its vast powers for handling complex and abstract information. (Mitchell, W. J.) Hence concerns within this dissertation will reflect a shift in the criterion of significance connected with the technology of Virtual Reality, away from that which is central to rationalist and pragmatic ways of thinking towards additional layers of aesthetic/metaphysical convergence. Thus the central issues of this thesis fall necessarily on, and between, ideas concerning consciousness, philosophy, space, art, joy, sexuality, myth, cognition, information-technology and metaphysical states of placement and quintessence in the formation of a theory of immersive connectivity that, I believe, is important for artists and theorists today.

AII: Technological and Philosophical Features of Immersive Viewing

Few cultures have ever had as much of a vested interest in compartmentalised perception as technological society. Specialisation insists upon informing individuals deeply but narrowly.
-Robert Hunter, *The Storming of the Mind*

Technologies organize, select and focus the environment through various transformational structures.
-Don Ihde, *Technology and the Lifeworld: From Garden to Earth*.

The essence of technology is nothing technological.
-Martin Heidegger, *The Question Concerning Technology*

Perhaps the essence of VR ultimately lies not in technology but in art, perhaps art of the highest order.
-Michael Heim, *The Metaphysics of Virtual Reality*

A constant fluctuation, sideways and upward, radiant, all-sided, announces to man that he has taken possession, in so far as his human capacities and present conceptions allow, of imponderable, invisible, and yet omnipresent space.
-László Moholy-Nagy, *The New Vision*

As I have previously suggested, a key hypothesis of this dissertation, which I will attempt to validate within, is that our immersive expectations (as formulated by VR) have been pre-shaped by antecedent non-logocentric micro traditions. But to begin to formulate a better understand of how VR engenders art and art history with this fresh source of non-logocentric stimulus we must first understand VR and VEs better. Moreover, to appreciate the full importance of non-logocentric immersion in terms of art history, an awareness of the frequently fertile annals of philosophic history will invariably prove beneficial for those who wish to understand the larger context of non-logocentric ideals for (and in) immersive art pertaining to any given period. This is so inasmuch as an understanding of any era's target-values are often insinuated within philosophic theories prevalent in that society, theories which subsequently shape succeeding receptions and reconceptions of its art.

On the technical side we shall start with the first publication to break the news widely of the developments in computer interfacing which precipitated Virtual Reality, the October 1987 issue of *Scientific American*. (Hayward & Wollen, p. 180) This edition explained that in VR, computers generate what *looks like* three-dimensional environments (VEs) while sensors track the immersant's virtual movements in the simulated space. A tracker is any device that provides numeric co-ordinates to identify the current position and/or orientation of an immersant. The tracker is often attached to the immersant's head, but it can also be used to track the position of other parts of the body or the total body, using at times ultrasounds, infrared light, electromagnetic fields, and/or multiple cameras. For example today there exists the Dual Purkinje Image (DPI) Eyetracker, a research instrument manufactured by Fourward Optical Technologies that determines the direction of the gaze over a large two-dimensional visual field without any attachments to the eye. It operates with infrared light which is invisible to the subject and does not interfere with normal vision. The DPI

Eyetracker has a response time on the order of one millisecond. With such a rapid and unhampering link, an immersant feels a convincing ontological sense of being a dynamic agent inside a VE.

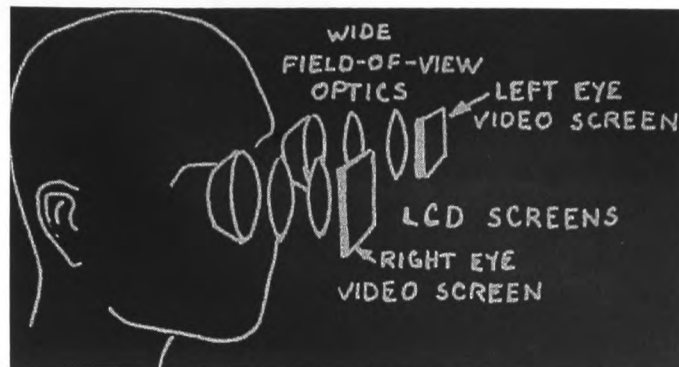
It is important to remember that in polygonal worlds the conventional rules of space and the impenetrability of matter need not apply. The restrictions of gravity and the restraining materiality of our familiar physical world may dissolve and one may be capable of drifting, wafting or slipping through a hyper-real space apparently detached from the physical restrictions of the material world. (Rheingold, 1991) While the computer software elucidates the character of the data represented visually as familiar spatial indicators (or lack thereof), *immersion* explains what makes the experience *feel* as if it were in correspondence with what resembles our experience of corporeality and spatial reality. How this issue is addressed in determining the quality of immersion is an aspect of the systems design. It may be designed to enhance supra-physical sensations or customary "real" (i.e., *naturalistic*) ones, (even as we know that nature *really* is a vast sea of waves and frequencies). (Miller, A.) As an example of the naturalistic type, at the University of North Carolina at Chapel Hill researchers have developed a treadmill which allows participants physically to walk with their heads in the virtual environment (each real step moves their viewpoint one virtual step). Thus immersants have the kinaesthetic feedback of physically walking added onto their virtual experience of reality.

We must be realistic here though about what we mean and expect when we employ the word *reality* unproblematically in terms of VR, for the assumption that we will find *reality* within a VR simulated world is spurious and as such may lead to disappointments based on erroneous presuppositions. (Putnam) The French sociologist Jean Baudrillard points out that there are multiple realities which make up the *reality* of everyday life: the *real*, the *simulated* and the *hyper-real*. (Baudrillard, 1983a) Indeed, as formerly insinuated, the notion of *reality* is perhaps a concept subsisting only in its effulgent word. The multimedia artist and founder of Immersion Studios, Stacey Spiegel, defines reality as that which is "a constant flowing together of multi-layered simultaneous interactions with all things of the world, material and immaterial". (Hoekendijk, p. 4) Zielinski's definition of reality as that which "refers to those dimensions of world/worlds which we can formulate and understand and which have been (co)constructed by us" is germane too. (Hoekendijk, p. 7) In connection to ideas of reality in VR, Myron Krueger coined the term *artificial reality* in the mid-1970s to describe his interactive computer-generated responsive art environments. Krueger emphasised non-intrusive tracking systems (systems that emit numeric co-ordinates for the changing positions in that space) which track people with pattern recognition techniques and display them and the surroundings on large projection systems. As accomplished in his *Videoplace* project and his *Vivid Group's Mandala System*, a computer system perceives and captures a participant's action in terms of the body's relationship to a VE and generates responses (usually imagery) that maintain the illusion that the actions are taking place within that world as a reality. (Krueger, 1982)

Consensual reality is also a useful term to remember here as it is the world (or a simulation of a world) as viewed and comprehended collectively by a society and hence supported as being *real*. (Walser) Indeed each era has its circumlocutions and its compliances; its privileges and placating obligations (Boyce), but for me the term *reality* indicates a perceptual totality of flux that is the ground of all plausible actions. However, for our purposes, to apprehend a world as real is to *feel surrounded by it* and to be able to *sally forth within it*. This surrounding mobile feature of "reality" will be regarded as the cornerstone of a general theory of aesthetic immersion.

A special feature of *cybernetic theories* (theories of feedback systems primarily based on the ideas of Norbert Wiener (1894-1964)) is that they explain processes in terms of the organisation of the system manifesting it (e.g., the circular causality of feedback-loops (Weiner, 1947)) which enables cybernetics to elucidate complex relationships from within. (Nichols) In looking at stand-alone VEs cybernetically, we see that in place of the totality of the *real world*, VEs offer a systematised (thus *total*) world via a sealed feedback-loop, making no recourse to exterior principles other than the continuing supply of electricity. But what concerns us even more here is the philosopher Warren McCulloch's adaptation of cybernetics in formulating a creative epistemology concerned with the self-communication within an observer's psyche and between the psyche and the surrounding environment. (Ashby) This is cybernetics' primary usefulness in studying the supposed subject/object polarity in terms of immersive experience, with its symbiosis betwixt space and immersant(s). Indeed this immersive feedback symbiosis is how VEs are recognised by the paradoxical cognomen: *virtual worlds*. (Boskovic)

What is important is that these virtual worlds refer to an immersive psycho/spatial experience which implies a *360 degree configured space constructed three-dimensionally* (Davies, 1998) when considered as the *collective optic-view* in terms of the *total eye-points possible* in a virtual world (particularly where there are multiple viewpoints attached to multiple sensors accumulated through a variety of continuous circular scanning movements). This latent 360° transcendency which surpasses the natural FOV of about 160° vertical by 180° horizontal (Kubovy & Pomerantz) inherent in hypothetical electronic worlds will be useful in developing an explanatory framework when discerning immersive ideal relations in the history of the mind even though HMDs today generally offer a FOV that is far under 180 degrees (often only 60 or 90 degrees). However researchers have discovered that a heightened sense of involvement in a VE comes with the widest possible FOV, even if the actual display allotted is much smaller. (Psootka & Lewis) Most all HMDs offer at least a 60° to 90° field of vision but computer scenes can be computed to fit into anything from 0 to 360 degrees FOV for any particular projection point. It is in acceptance of the fully expanded, *ideal 360 degree FOV* that this dissertation will base its postulates.



For me this spherical, ideal, all-over, 360° perspective was aptly demonstrated (on experiencing on a single-processor Silicon Graphics (SGI) VGX R4000 Reality Engine) a bewildering switch into what in VR is called the *allocentric mirror world*, the bird's-eye view (Buci-Glucksmann's Icarian gaze) of a virtual world. A *mirror world* (Gelernter, 1992) is a software concept developed by David Gelernter at Yale University "in which the computer creates real-time miniature maps that mirror the larger world in which the user is present". (Heim, 1998, p. 216)

From the allocentric mirror world I experienced, one can see all of the world (*including oneself*) while experiencing a fluidness of movement concerning yaw, pitch, roll, pan, zoom, and swivel. This allocentric occurrence was one first of disorientation and then of reorientation into a supra-perspectivisation, connected to joyful feelings of floating within an expanded hyper-space of colossal dimensions. Experiencing the hyper-space's vertiginous heights and deep abysses and vast widths through the penetration of apparent solid confines, entailed an experiential feeling of beatific disembodiment and placelessness. The 1993 Ars Electronica and Golden Nica award winning artists group Knowbotic Research KR+cF uses the term *non-locations* for such spatial experiences (Hoekendijk, pp. 3-8), terminology inspired by the concept of what is called *deterritorialisations* in the theories of Gilles Deleuze and Félix Guattari. (Bogue, 1989) Knowbotic Research KR+cF distinguish non-locations as "aggregates of multi-layered occurrences in physical and electronic space" which are "non-homogeneous, fragmented, incomplete" while being at the same time "continuous, hermetic and flowing". (Hoekendijk, p. 3)

My prismatic allocentric mirror episode was better understood and appreciated after reading a U. S. Army Research Institute for the Behavioral and Social Sciences research report which showed that a 360° VR virtual scene is biocularly seen (using Virtual Research's EyeGen 3; an HMD which combines visual displays with roughly 45° horizontal FOV) as curved in a parabolic or cylindrical space. When viewing a 360° scene it was felt to exist behind the head and to fill in the space behind the immersant. (Psotka & Ressler)



another HMD

In virtuality the necessities and dictums which previously regimented actual perception and space can be abandoned. Certainly VE designers have the choice whether to leave the implied attenuated 360° virtual space endemic to the properties of VR alone, or to limit and constrict the space via renaissance perspective (Kubovy) (which is often the case); but principally I am operating under the basis that the analytic, reductivist, Cartesian window helped force the subject outside of the art experience, and that the capacity of the aesthetic 360° immersive arena redresses that expulsion by facilitating a nexus of dynamic psychological/perceptual explorations. Indeed once we fathom the allocentric mirrored 360° optic aspect of virtuality, we begin to distance ourselves from previous trite spatial conventions.

What physically we cannot distance ourselves from however, are our eye's intrinsic circuitry. In this respect a relevant intrinsic attribute of sight pertinent to immersion is *peripheral vision*.

The optic peripheral expanse runs from the edges of the retina, through the optic chiasm to the thalamus and into the lateral geniculate from where it is distributed into the occipital cortex at the back of the brain. The individual's optic periphery is consequential to this consideration because it is through peripheral vision that VR optic images give the immersant the sense of immersion in rapport with the virtual world's geometric field-of-view (FOVg), the angle in degrees of the computed visual scene. Quantitative parametric studies have shown that the natural human FOV is approximately 160 by 180 degrees in its total range of vision, since our two eyes have overlapping 140° scopes. This range is calibrated by considering the two eyes' angle of convergence, the angle between the two eyes as sighted on a distant point. A feeling of immersion arises with a FOV greater than 60°. (Psotka, Davison & Lewis)

HMDs operate with the following characteristics: degree of FOV, contrast, resolution, weight, tracking implementation, and binaural stereo sound. Most often an HMD is combined with a head-tracker so that the space displayed changes as the head moves.



another HMD

At the onset of the 1960s, Morton Heilig devised what he called the *Telesphere Mask* and planned a *Stereoscopic Television Apparatus for Individual Use* (patent number 2,955,156 granted October 4th, 1960). But the first indisputable example of a multi-sensorial simulator was Heilig's *Sensorama Simulator*, first shown in 1962. The *Sensorama* was an extensive apparatus (part of Heilig's larger plans for an *Experience Theater* which, among other things, included a head-mounted stereophonic television display) which utilised stereo-sound, odour, breeze and three-dimensional movie-loops to feign the impression of riding a motorcycle through Brooklyn. (Rheingold, 1991, p. 50) Since the late-1960s, computer scientists Frederick Brooks, Stephen Pizer, Henry Fuchs and others, advanced computer applications which would later develop into VR-HMD technology at the University of North Carolina at Chapel Hill. At the Wright-Patterson Air Force Base outside of Dayton, Ohio, Thomas Furness directed and developed for the United States Air Force the first fully-functional high-resolution HMD which was used to train fighter-pilots called the *Visually Coupled Airborne Systems Simulator* (VCASS). This HMD system was see-through, rather than fully immersive in intention. (Stone) Furness left Wright-Patterson in 1989 to start the Human Interface Technology Lab (HIT Lab) at the University of Washington.

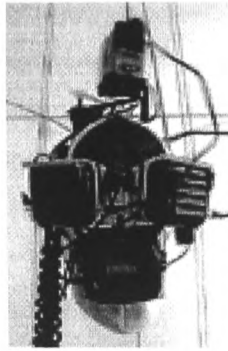
In 1965, as a way of getting metaphorically *inside* the computer, Ivan Sutherland and several colleagues assembled a head-mounted display which combined head-position tracking and real-time interactive computer graphics at MIT's Lincoln Laboratory, a lumpish apparatus now considered the first actual HMD. (Rheingold, p. 81) Sutherland was the first to mount small computer screens in binocular glasses to immerse the wearer inside of computer graphics (even though they had only a FOV of 40 degrees and both eyes saw the identical non-stereoscopic information). He continued his research at the University of Utah in Salt Lake City and that is where the first fully-functioning HMD was tested on January 1, 1970 with an immersion into a wire-frame cube. (Rheingold, p. 106) In 1984, following a talk on stereoscopic head-mounted displays and wide-angle views by Scott Fisher (who worked on the idea at MIT in the late-1970s), Dr. Mike McGreevy and Jim Hsumphries at NASA/Ames Research Center fabricated what became the contemporary (accessible) HMD with a FOV of around 120 degrees. It was then called a *Virtual Visual Environment Display* (VIVED).

(Rheingold, pp. 143-147) According to Rheingold, it was there at the NASA/Ames Research Center that "a human interface researcher, a cognitive scientist, an adventure-game programmer and a small network of garage inventors put together the first affordable VR prototypes." (Rheingold, p. 128)

According to McGreevy, a prominent stimulus towards the creation of the HMD was the July 1, 1966 issue of *Life* magazine which had within it an article on the Surveyor space mission, the first unmanned landing on the moon. The Surveyor had along with it a swivel camera which transmitted images back down to earth. When the scientists wanted to see what the Surveyor saw, they pasted the thousands of component images printed out onto the inside of a large sphere. They would then get an immersive view by poking their heads up through a hole into the interior of the sphere. (Rheingold, pp. 139-141)

HMDs are now formulated generally as a helmet which consists of two small screens, one for each eye, which offer about 70 to 90 horizontal degrees FOV compared to the approximately 180 degrees in reality, which doesn't sound like much until you consider that a typical television (Lubar) or computer screen offers around 4 to 6 degrees of FOV. As previously stated, most HMDs proffer a 60 to 90 degree FOV, but a virtual setting can be computed to fit into anything from a 0 to 360 degree FOV for any particular projection point. (Psootka & Davison, 1995) *Based on the 360° potentiality, I can assert that the predominate unstinting ideal property of virtual immersion's visuality is a first-person omni-perspective.*

In nearly all HMDs the stereoscopic images are perceptually identical in size, so limited anisometropia (differences in the sizes of the two retinal images) is not a difficulty. Such a head-mounted display system allows the immersant to feel as if (s)he were bodily entering what is in fact two stereoscopic flatly presented computer generated images as if they were an integer three-dimensional vista. This is commonly know as a *jack*: to connect and enter virtual space is to jack into it. Generally, when one jacks into a VE there is only one, solipsistic point-zero ego-centre (inner viewpoint); the wearer of the HMD, even when interacting with other users of the system. (Psootka, Davison & Lewis) Most HMDs, such as the Eyephone^a (a head-mounted display made by VPL (Virtual Programming Language) Research Incorporated - the enterprise founded by Jaron Lanier which spun-off from research done at the Virtual Interactive Environment Workstation (VIEW) lab) displays a 60 to 90 degrees FOV. Such HMDs have been wickedly satirised by the American artist Vito Acconci in his 1993 *Virtual Pleasure Mask* series.



Vito Acconci, *Virtual Pleasure Mask*

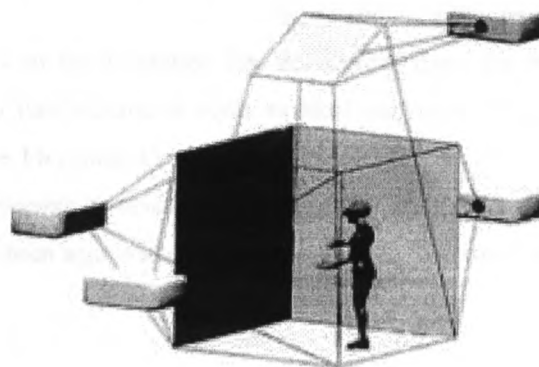
The Binocular Omni-Oriental Monitor (BOOM), a display device suspended from a weighted boom that can swivel freely about, also allows a 60° to 90° FOV. (Fisher, pp. 6-7) However the Simulator Training Research Advanced Testbed for Aviation (STRATA) - a fully-functional flight simulation facility at the Army Research Institute Rotary Wing Aviation Research Unit in Fort Rucker, Alabama - is involved in several experiments with more advanced, wider HMDs. STRATA, for example, has been experimenting with HMDs capable of presenting a high-resolution 360° FOV display.

HMDs have been the subject of extensive research and development (R&D) in various countries, mostly in the dominion of avionics (such as the *Supercockpit*: a United States Air Force project led by Tom Furness that advanced the engineering of VR and HMDs using digital displays of instruments and terrain) but more recently for preparation of tank commanders and foot soldiers too. Most of these devices use what is called *See Through Displays* (STDs) which allow the wearer to see virtual data and/or images superimposed over the material world. Such a technique provides a display of flight or attack information or other data displayed on a semi-silvered mirror or holographic optical element to pilots while retaining a normal view of and from the cockpit. This blending of computational virtual space with ordinary viewable space indicates the subsequent emergence of a new immersive topological cognitive-vision of space which I call *viractual space*: the space of connection betwixt the computed virtual and the uncomputed corporeal world which merge. This space can be further inscribed as the *viractual span of liminality*, which according to the anthropologist Arnold van Gennep (based on his anthropological studies of social rites of passage) is the condition of being on a threshold between spaces. (Gennep) The term *liminal* was subsequently used by the anthropologist Victor Turner in his 1974 book *Dramas, Fields, and Metaphors*. (Turner, V.)

Concerning this viractual span of liminality, I am reminded here of two very different, yet complimentary, concepts: *entrainment* and *égréore*. Entrainment, in electro-physics, is the coupling of two or more oscillators as they lock into a commonly sensed interacting frequency. (Bohm, 1980) In alchemical terms an *égréore* (an old form of the word *agréger*) is a third concept or phenomenon which is established from conjoining two

different elements together. (Richardson, p. 27) I suggest that the term (concept) *viractual* (and *viractuality*) may be a concordant entrainment/égréore conception helpful in defining this third fused inter-spatiality which is forged from the meeting of the virtual and the actual, a concept close to what the military call *augmented reality*, which is the use of transparent displays worn as see-through glasses on which computer data is projected and layered. Such an application is called in the military a *heads up display* (HUD), which is a display device which permits users to see computer graphics superimposed on their view of the world. (Psotka & Davison, 1995) For many other military purposes it is unnecessary (or even undesirable) to see the real world and the helmet displays 100% of the information.

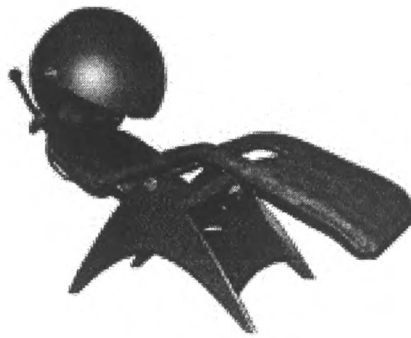
Viractuality is a more fully physiological account of vision in virtuality than has been previously articulated. It is a significant envisioning concept which indicates and initiates communions of the protoplasmic body to virtual spatial conditions. As such it is at the core of what is known as *ubiquitous computing*, the so-called third wave in computing (Weiser) exemplified by Studio A.E.M. (Architecture at the End of Metaphysics) an architectural firm made up of Stephen Perrella, Tony Wong and Rebecca Carpenter, which maintains a design philosophy responsive to the digital information that surrounds us, replete with their use of digital-imaging wallpaper. Roy Ascott, in his essay "The Architecture of Cyberception", addressed this hybrid space when he wrote that "... to inhabit both the real and virtual worlds at one and the same time, and to be both here and potentially everywhere else at the same time is giving us a new sense of self, new ways of thinking and perceiving which extend what we have believed to be our natural, genetic capabilities." (Ascott, 1994a) This coextensive notion of viractual immersion has piquant ramifications for immersive theory in terms of multiple locatedness. Indeed, one of the wider implications for art in this new viractual space is the proclivity to solicit the theoretical viewer/participant (what I call the *viewpant*) to respond to the work in both a contemplative and physical way, or at least in an implied tension between these two poles when one side outweighs the other. It is important to remember that *the viewpant is involved often with a series of different levels of immersion in a dynamic emergent continuum.*



The CAVE

There are also in development other technological systems aimed at producing more unencumbered immersions, which are generally called *spatially immersive displays* (SIDs). SIDs are wrap-around panoramic displays which create an unencumbered, ultra-wide field-of-view, most notably achieved in the Goto Virtuarium DOME system (a 15 metre diameter by 15 metre high dome (49.2 by 49.2 feet) with a 360° by 180° FOV), the 3 by 3 by 3 metres (10 by 10 by 10 foot) CAVE (Cruz-Neira, Sandin & DeFanti), and the Flostation/Floorooms (which include SID displays called Bubble Domes).

The mini-dome Flostation was designed originally for training astronauts and to provide them with a higher-level of immersion than other immersion techniques. HMDs had been found to create head fatigue while CAVEs and other group projection systems provide shared spaces where the sense of immersion is obscured by having other people visible. With a Flostation, attention to exterior stimuli is consciously reduced so that attention to the virtual is expanded. At present mini-dome Flostations can only be experienced regularly at the Virtual Environment Technology Laboratory at the University of Houston.



Flostation

The Flostation was developed by Brian Park's Flogiston Corporation in Austin, Texas as a NASA spin-off, receiving its capital investment during the NASA funding period between 1994 and 1997. In 1994 Flogiston Corporation began the development of the Flostation by mounting a Flogiston Chair onto a small motion-base platform. The evolution of the Flostation (the commercial name for the Personal Motion Platform) began in 1980 however with Park's desire to build an ideal cosy-chair conducive to extended meditations which became known as the Flogiston Chair when it went into limited hand-made production in 1989, around the same time Parks became involved with VR via Eric Gullichsen and Pat Gelband of Sense 8. The patent for the Flostation has been approved by the U.S. Patent Office under the title Immersive Cyberspace System.

The Flostation provides a serene, non-contacting, VE immersion which operates on the basis of a method called *neutral immersion* (the posture experienced in zero gravity) to increase the sense of detached presence in VEs. Neutral immersion requires the occupant to lie still, reclining in an embryonic womb posture which

helps to reduce awareness of normal surroundings and increases undistracted awareness of surrounding cyberspace. Buttons under the right arm propel motion and motion cueing, but may also act as very low frequency vibration transducers which may vibrate the entire body.

The Flostation includes a display called the Bubble Dome, which by using back-projection techniques and a wrap-around dome fully fills the immersant's FOV. The immersant sits in the chair and reclines to a relaxing supine position while the dome lowers over the head and the projector visor illuminates. A spherical graphical user interface appears which displays a number of icons, which connect to available VEs. Real-time image warping software (which compensates for the shape of the dome) provides a 180° horizontal by 120° vertical view of the VE. There is nothing touching the face nor the ears and the body remains stationary in the modified neutral posture. The head does not turn and the eyes look straight ahead. Sound is transmitted using speakers mounted off the ears so that there is no headphone pressure, and low frequency vibration is applied using two powerful vibrators which are mounted in the chair's framework which are used to vibrate the lower body. The motion base can also be treated as a subsonic vibrator for very low frequency vibration.

The integration of neutral posture, wrap-around vision, nearphone sound, low frequency vibration and motion cueing provides, it seems to me, the most advanced immersive VR technology available today, as it provides the feeling of floating in the space/fluid of the womb without an entrapping HMD and glove to wear, thus taking us closer to feelings of our naked immersive pre-birth state.

Systems with connected multiple Flostations are what Brian Park calls "Florooms". The Floroom is a room which contains a number of networked Flostations where people can enter VEs together in groups; which, I believe, will be the predominant ideal aspiration shaping VR in the near future. In a Floroom each person reclines in a modified form of the neutral posture, with the non-contacting wrap-around hemispherical visor floating circuitously around their heads providing them with personal views in the shared VEs. Any number of Flostations can be arranged in a circle facing outward, all mounted on motion platforms which respond to acceleration vectors created by the central-processor. The system provides motion feedback to the immersants in synchronisation with their movements inside the digital world.

Like the Bubble Dome, another advanced SID model in operation now is the U. S. Military's F-18 dome simulator, a 180° FOV mini-dome display using back projection with a hi-resolution focus utilised in the training of fighter-pilots for the F-18 Hornet airplanes. However it is even more interesting to read in *Expanded Cinema* that the Canadian media-artist Francis Thompson saw artistic merit in the mini-dome SID-type display in the late-1960s. Thompson rightfully imagined the mini-dome SID display as creating a situation where "images completely fill your field of vision". According to Gene Youngblood, Thompson found in the SID "a potential for a new consciousness" where people are introduced into, as Thompson says,

"a whole new visual world which would be emotionally, physically, and intellectually overwhelming". (Youngblood, p. 358)

In terms of a "potential for a new consciousness" achieved through connected SIDs, the connected Floroom, in conjunction with what is called *Virtualised Reality*, seems to be the best (ideal) immersive arrangement I can hypothesise based on my research. Dr. Takeo Kanade, director of the Robotics Institute at Carnegie-Mellon University in Pittsburgh, is developing a new visual medium called *Virtualised Reality*, a process which delays the choice of viewing-angle until viewing time. In *Virtualised Reality* any visual space is mapped using multitudinous virtual cameras which record the space in 360°. (Psotka & Ressler) Triangulation and texture-mapping enable the placement of what is called a soft-camera to reconstruct the space *from any viewpoint*. The computer then knows every point of view which allows an immersant to move about freely in the scene. The collection of the 360° scenes is called the *virtualised world*. The immersant can therefore freely move about in the VE and interact with it from any viewpoint chosen dynamically at viewing time.

But regardless of how it is obtained and to what level of totality it rises, by my terms, immersive ontology would be where the user feels altogether enclosed but free to move in a synthetic environment. This characterisation compliments Michael Heim's definition of the essence of VR as being *sensory immersion in a virtual environment*. (Heim, 1993, pp. 109-128) Non-immersive VR, in for example a desktop virtual environment, is when you are looking at a three-dimensional rendered image on a screen in front of you. Typically it is a conventional computer monitor onto which a three-dimensional environment is rendered. It is *the ability to perceive the environment from within* which is the consequential property that immersive ontology brings to informational interchanges (along with its revised evaluations of self from bound to boundless) and which distinguishes immersive art from art graphics and from flat, two-dimensional, window-like framed spatial representations.

Thus I am only considering here in *Immersive Ideals / Critical Distances* Virtual Reality as the immersive version where some kind of immersive display and tracking equipment is employed in order to create the psychological illusion of being inside a computer generated environment rather than viewing it from the outside through a screen. Otherwise it is too general a term, applying to computer-aided modelling programs, among other myriad software/interface applications.

In the technical literature of academic researchers and industrial developers the terminology VR also is customarily synonymous with immersive VR as it is its unique aspects of *interior interaction within a world* which has been seen as the radically different attribute of VR interfaces (as distinct from other graphical user interfaces) in that it both separates out and then connects the user into what Knowbotic Research KR+cF

point out to be VR's "field of fluctuating activities". (Hoekendijk, p. 13) This engagement within an enlarged perspicacious propensity, in conjunction with additional aspects of psychology within the subject's mental state and world-view, construct for us the consequential part of immersive VR's metaphysical/aesthetic concerns.

Many artworks in the past have been fabricated according to definite and overt metaphysical principles, but it is exceptional for a mode of art-making to capsize an entire philosophic model and to create a new tone of anticipation through a technique of synthetic internal coherence as 360° artistically mediated VE installations (what I will call *VE°art*) may do. Indeed total-immersion's effectiveness requires an alteration in ontology (our metaphysics of being) even as I wish to stress again that VEs' immersive space is *imaginary*, or more precisely, *symbolic* and thus affiliated with our epistemology (our understanding of our acquisition of belief and knowledge) as well as our ontology. The essential opposing philosophy to epistemological symbolisation is that of *rational empiricism*, but there are many gradations and intermediary positions staked out from this binary opposition, including Immanuel Kant's *synthetic a priori*, which allowed for an account of art, among other things. Kant held that space was in essence mental and *a priori* to the perception of exterior objects. (Savile, 1993) For a deeper investigation of Kantian metaphysics in terms of VR see Rita Lauria's Internet essay "Virtual Reality: An Empirical-Metaphysical Testbed". After reading it, what became immediately clear to me was that the implicitly dialectical use of immersive experience in a dialogue between the artist, new technology, and art history creates the means for significantly dilating the epistemological repertory with hitherto incompletely acknowledged ideas and modes of aesthetic praxis which affect ontological premises.

The history of art is, of course, full of new epistemological shifts and I maintain here that the shift in perspective which surrounds Virtual Reality when used to display 360° artistic data is just such a shift, replete with a newness based on a long preparatory gestational development, as Section B of my thesis will demonstrate. The main intention in that section will therefore be to identify artistic immersive perceptual shifts in ontology which involve fundamental changes in aesthetic perception. My method then will be to pursue, through reflection on the insights VR suggests to us artists today (which indeed engenders extraordinarily deep artistic conflicts), a re-examination of aesthetic assumptions. This will entail a review of past and present approaches towards aesthetics, for our conception of the cultivated future depends on the kinds of astute and discriminating questions we seek in the past.

AIII: Allocentric Cognitive Aesthetics and the Subject/Object Merger

All human beings who reach adulthood are programmed biocomputers. Literally, each of us may be our programs...

-John Lilly, *Programming and Metaprogramming in the Human Bio-Computer*

A great artist can make art by simply casting a glance.

-Robert Smithson, *A Sedimentation of the Mind: Earth Projects*

By greatness I do not only mean the bulk of any single object but the largeness of a whole view considered as one entire piece.

-Joseph Addison, *Spectator 412*

That ye, being rooted and grounded in love, may be able to comprehend with all saints what is the breadth, and length, and depth, and height.

-Paul the Apostle, *Epistle to the Ephesians, III: 17-18*

A close association of space and consciousness can be seen from the fact that in the higher stages of absorption the experience of the infinity of space immediately leads to the experience of the infinity of consciousness.

-Lama Anagarika Govinda, *Creative Meditation and Multi-Dimensional Consciousness*

Materialism is a beautiful and compelling view of the world, but to account for consciousness we have to go beyond the resources it provides.

-David Chalmers, *The Conscious Mind*

You never know what is enough unless you know what is more than enough.

-William Blake, *The Marriage of Heaven and Hell*

Aesthetics has traditionally been connected with philosophic ideals and attempts to define philosophically the concepts behind art (regardless of Plato's notorious philosophical urge to oust the artists from the Ideal Republic to assign philosophy the sole mode of knowing). (Barasch) Traditionally aesthetics examines the problem of how to relate knowledge claims to aesthetic evaluations (Langfeld), but the factual autonomy of this discipline itself seems questioned by the discipline of epistemology. Hence *Immersive Ideals / Critical Distances* shall strive to embed itself in the genealogy of the new rhizomatic epistemology and its aesthetic amalgamation in hopes of affecting the expectant underpinnings and perceptual disposition of our technologically amplifying culture. The nature of this discussion then calls for an examination and exploration of *idealist aesthetic cultural space*, what David Carroll calls *paraesthetics*, a vein rich in associative thinking. (Carroll)

The term *aesthetics* is traditionally used to distinguish the appreciative from the expedient. The notion originated with a 1739 text by the German philosopher Alexander Gottlieb Baumgarten (1714-1762) who introduced the term *aesthetic* in his text *Meditationes Philosophicae de Nonnullis ad Poema Pertinentibus* and defined it as the *study of attraction as concerned solely with discriminating perception*, that is, that aesthetics should be a separate, independent concern dealing only with perception. (Sparshott, 1963) In

Baumgarten's theory much attention was concentrated on the creative act and the importance of feeling. For him it was necessary to modify the traditional claim that "art imitates nature" by asserting that artists must deliberately alter nature by adding elements of feeling to perceived reality. In this way, the creative process of the world is mirrored in art activity. Baumgarten's thought in this regard was influenced by the philosophy of Gottfried Wilhelm Leibniz (1646-1716) and that of Leibniz's pupil Baron Christian von Wolff (1679-1804).

The problems of aesthetics had been treated by others before Baumgarten, but he both advanced the discussion of art and beauty and set the discipline off from the rest of philosophy. Immanuel Kant, who used Baumgarten's *Metaphysica* as a text for lecturing, retained Baumgarten's use of the term *aesthetics* to apply to the entire field of sensory knowledge. When combined with logic, aesthetics formed a larger discipline which Kant called *gnoseology*, a theory of knowledge which to other philosophers was epistemology. Only later was the term aesthetics restricted to questions of beauty and of the nature of the fine arts. Kant used the term *aesthetics* to argue that aesthetic appreciation reconciles the dualism of theory and practice in human nature, thereby leaving the way open to identify *beauty* (a relative, shifting and elusive concept (Gadamer, 1986)) as a profoundly psychological quality (and not inherent in the artwork) by formulating a distinction between determinate, determinable, and indeterminate concepts. For him beauty is non-determinate because we cannot know in advance by applying a set standard whether something is beautiful or not. He also deemed the concept of beauty non-determinable because due to creativity we will never find such a standard. Beauty, therefore, must reside in the indeterminate supersensible. (Kant, 1960)

In respect to immersive contingency this influenced Kant to formulate his *sublime ideal* which moved philosophical inquiry away from what was weakly established as the objective ideal in which the world, and the human subject within it, could be described as if from an outside (logocentric) position. (Crowther, p. 60) Kant, in *Observations on the Feeling of the Beautiful and Sublime*, showed us that intellectually humans are incapable of knowing sublime ultimate reality, but this need not, and must not, according to Kant, interfere with the human obligation of performing as though the ideal character of this reality were certain. (Kant, 1960) More will follow on concepts of the sublime shortly.

Although Sigmund Freud was not an intentional aesthetic theorist, he did influence aesthetic theory through his comprehensive psychoanalytic framework and through his use of art to elucidate the fact that the breadth of psychoanalysis extended beyond dreams and neurosis into aesthetic achievements. (Freud, 1952) Walter Benjamin (1892-1940) conceived of aesthetics not as part of a theory of the fine arts, but as a theory of perception. (Benjamin, 1978) Roy Ascott has amended the concept substantively by redefining it in terms of the process properties of telematic connectivity where "the classical concern with the surface image of the world gives way to the technoetic aesthetics of creative consciousness...". By the *technoetic* he means the "technology of consciousness which provides the substrate from which a new art is emerging." (Ascott, 1996)

Paul Virilio has put forth the *aesthetics of disappearance* into consideration, a disappearance, according to Virilio, due to the ubiquity and dexterity of the transmission of information which enables information to swiftly reconjecture modifications. (Virilio, 1991a) Subsequently Margot Lovejoy has introduced into theory the term *transaesthetics* as "technology does not just change the kind of art that can be made and our relationship to it, it transforms the nature of human perception. (...) The move to the electronic era from the mechanical age has dramatically transformed our experience of the body and of the psyche, changing our perceptions, our conceptions of self, our sense of time and space, and our cultural relationship to the world." (Lovejoy, 1997b)

One wonders, then, what does the sublime (Kant), psychoanalytic (Freud), perceptual (Benjamin), technoetic (Ascott), disappearance (Virilio) detected in transaesthetics (Lovejoy) do to issues of aesthetic distance? It would be preposterous to pass judgement on the aesthetics of the immersive space of VR without asking such a question. The advent of the flying machine (airline) unquestionably was a radically new achievement when it first appeared in 1903, but one need only remember its pre-history: the history of the balloon, of flying myths and irrational dreams to realise that this new accomplishment was founded on earlier, often times forgotten, seed ideals and experiments which were less pragmatic than imaginary. The same holds true for Virtual Reality and its short, but resonant, aesthetic record.

Concerning the technoetic aesthetic, in *Speed and Politics* Paul Virilio implies that we are not solely in the process of losing physical space to the speed of electronic transmissions with VR but that we are also losing the critical distance of duration. (Virilio, 1977) In fact immersion in a Virtual Environment is viewed by many theorists of Post-Modernism (Kroker & Cook) as a passive subjection to the supremacy of the world-designer and that immersion, by sucking people into the work, deprives them of critical consciousness. (Ryan) I do not share these last views or the same would be true upon entering an 18th century Rococo chapel and it is not, but consequently, after reflecting on Virilio's observation concerning the need for a critical distance of duration and finding it truthful, this dissertation will endeavour to reclaim a small allotment of past time by sustaining critical distance from the technically skilful seduction of VR so as not be confined to our electronically charged historical moment and its sense of accelerated time and aesthetics alone. However the question of the genealogy and ontology of total-immersion is escalating in importance in light of contemporary conditions of increasing globalisation and its totalising means: the trans-nationalisation of State economies into a single (total) digital global economy. (Beniger) Thus questions concerning phenomenological states created when a system's display totally monopolises and dominates a users' field, take on broader socio-economical meaning. And in this sense immersion has the capacity (perhaps obligation) to become a signifier, a referent that is no longer tied only to that which it refers but suggests entire systems of references. Thus the term immersion shall also be used in reference, though less precisely, to the individual's position in relationship to the social unconscious of the media environment. (Jameson) By *social*

unconscious I mean the collective field of inherited ideas, images and myths that exist apart from individual memory (Jung, 1950), though nonetheless informing it. (Meier) It is that range of influences which underlie the field of sociology, which is the study of the development and functioning of society. Sociology emerged out of the inquiries of the French philosophers Charles de Montesquieu (1689-1755), Henri de Saint-Simon (1760-1825) and Auguste Comte (1798-1857) (who coined the word *sociology* in 1839) and the Scottish philosopher Adam Ferguson (1723-1816). The notion of the social unconscious scrupulously avoids Comte's progressive assumptions (Comte's only standard of rationality was that of empirical science) in his argument that human thought developed in consecutive stages: mythical, religious, metaphysical, scientific (Comte) in favour of a multi-leveled rhizomatic-like model of cognitive hyper-totality. Hence an understanding of the idealised concepts behind notions of *totalisation* (Godin) and its remarkable mono-sense of complete universal culmination (and hence immersive closure) is consequential to this dissertation.

Florian Rötzer maintains that as the aesthetic distance between the subject and the image is cancelled out via immersive space, art becomes what he calls a *total-data-work*. (Rötzer) This theme of the *total-data-work* was previously articulated too in Roy Ascott's 1989 *Kunstforum* essay "Gesamtdatenwerk: Konnektivität, Transformation und Transzendenz" (Total-data-work: Connectivity, Transformation and Transcendence) in which he put forward the proposition that there is a fecund and open-ended "universal data-space" from whose "ground of undifferentiated wholeness we construct virtual realities." In this essay Ascott reiterates the conceptualisation of the computer as a continuous "pure system" which partakes in a "universal transformative matrix" (which includes the total-data-field) and he compares this total-data-field to the holographic unity endemic to holograms as "to be in or at any one interface is to be with all interfaces throughout the network of which it is apart." (Ascott, 1989, pp. 100-109) I find this view to be complimentary to the hologonic model of cyberspace and useful in illustrating attributes of the psychology of totalisation characteristic of visualising virtual immersive space. Certainly it is obvious and true that, technically, cyberspace is a hyper-unified whole because every server of the Internet must behave exactly like any other server: the same requests must evoke the same responses.

Gene Youngblood, in his reference work *Expanded Cinema*, maintains that the notion of universal unity is a "logical result of the psychological effects of the global communications network". (Youngblood, p. 86) In noticeable agreement, Ascott's essay concludes with the observation that artists are impatient with single modes of operation in data-space and that they are increasingly searching for a "synthesis of image, sound, and text" in annexation with "environmental dynamics" and "ambient transformations" in order to attain a "seamless whole" (his *Gesamtdatenwerk*) which, he maintains, reflects "the planet as a whole, its data-space and its electrical noosphere." (Ascott, 1989, pp. 100-109)

Noosphere is a term modelled after *atmosphere* signifying the space occupied by the *totality of human knowledge* collectively available and the processes operating in this space. (Krippendorff, *Principia Cybernetica Web*) The French theologian and paleontologist Pierre Teilhard de Chardin (1881-1955) spoke of the noosphere as the "film of organised intelligence that encircles the planet, superposed on the living layer of the biosphere and the lifeless layer of inorganic material, the *lithosphere*." (Youngblood, p. 57)

It is noteworthy to point out that a search of the *COPAC On-line Public Access Catalogue* (<http://copac.ac.uk/copac/>) housed at the University of Manchester, for the key word *Total* produced a whopping 1,790 book titles with the English word *Total* in its title; works ranging from John Burch's *Computer Control and Audit: a Total Systems Approach*, to Marabel Morgan's *Total Joy*, to Gyles Brandreth's *Total Nonsense Z to A*. Such a wide display of totalising concepts goes along with what Youngblood reports (but does not reference) William S. Burroughs (1914-1997) as calling our *Age of Total Confront*, noting that all the heretofore invisible aspects of the human condition had suddenly become visible. (Youngblood, p. 66) The falsity and even dangers of the (supposedly) totalising concept and its darker connotations, particularly those aspects of *total ideology* which have tended to impede reconfigurations of its boundary definitions from achieving a more valid reflexivity, must be considered. Typical of this danger is the old con of promising commodious closure to the masses via totalising imagery, which operates at various levels in justifying the collected exploitation and manipulation of people through their emotional attraction to totalised concepts of contented closure. (Levinas) However it appears that there is in the human quite an appetite for, and aspiration towards, totalising revelations; and all explanations which function in terms of some united principle or explanatory device exhibit this desire. One sees it, for example, in the now mundane artistic devices of montage and collage which have become the common language of print media, film and television; unities which deserve the adjective *esemplastic*, a concept Samuel Taylor Coleridge (1772-1834) invented to indicate the faculty of the mind that can fuse unrelated things into a poetically holistic singularity.

The validity of a total anything, of course, came under severe attack with Post-Modernism/Post-Structuralism (Sarup) in which the realisation emerged that concepts and images were always already laden with specific cultural values and implicated in networks of prejudiced and invested power. Structuralist concepts of totality (based primarily on the work of the Swiss linguist Ferdinand de Saussure (1857-1913), led post-structuralists (Harland) to formulate such theories where the impossibility of ever adopting one transcendent meaning is maintained and this trend has carried over into a general inclination. For example, we can recognise this inclination when Lev Manovich says in his essay "The Aesthetics of Virtual Worlds: Report from Los Angeles" that the space of the Web in principle can not be thought of as a coherent totality as it is a collection of numerous files, hyper-linked but without any overall perspective to unite them. (Manovich, 1996) Along these lines, Donna Haraway in a consequential early essay wrote that "we have learned that

unities are difficult historical achievements fraught with inevitable exclusionary practices". (Haraway, 1983) For me, however, her assertion "inevitable" is equally problematic in its totalising sweep and I have problems too with Manovich's limited focus. Besides, even if totalities are rejected outright we ultimately allude to unconscious concepts of totalities which implant and shape our preferred theoretical domains. (Meier) Indeed according to George Kubler, concepts of totality make up the very nature of our thought process in that we understand the discontinuous events which make up our experience of life only by the connective summing identities we imagine among them. (Kubler, p. 67) So it is important to focus on the nature of this concept of totals and on all of its psychological implications; not to insinuate accepting or pejorative judgements against the urge towards totalities, but to note a persistent desire for them and to record the aesthetic appetite that apparently fosters them. (Levinas)

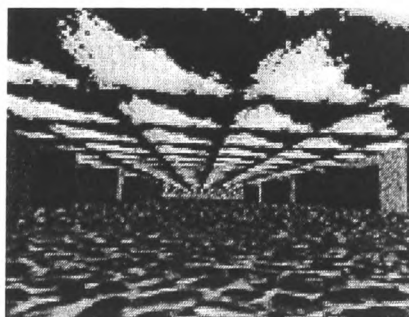
Stemming from this discussion of totalities I expect to arrive at a theoretical position concerning immersive art (with particular emphasis on the totality inherent in electronic space) which will point the way towards an emerging immersive aesthetic. This theoretical activity requires a philosophic element that art criticism alone does not possess. To produce a new set of ideas whose aim is a broad understanding of the mingling of the old division between the artist and the beholder within an ideal, all-encompassing, ambient situation requires that we view recalcitrant artworks which are merely immersively suggestive, as stimuli to implicative philosophical generalisations. To do so I will, in a sense, negotiate an insight into these artworks symbolically which, as Suzanne Langer suggests, is a deeper philosophic reading, "deeper than any semantic acceptance of their use as signs and referents". And moreover, as Ms. Langer goes on to say, a philosophic reading "more essential than any schema that may be heuristically read". (Langer, 1953, p. 22)

Such an approach is philosophically useful in that Ms. Langer's conception of art is one of presentational symbols which preclude established significance. Subsequently she replaces the assumption of conclusive meaning with one of *vital import*, which is the non-objective communication of emotional significance. (Langer, 1953) This seems to correspond to Sean Cubitt's idea that "art is a form of aberrant encoding that precipitates internal shifts within a communicative world, whose innovations ignite trails of knock-on effects, and whose accidental grammars can collide with and interfere in neighbouring discourses". (Cubitt) The architectural theorist Stephen Perrella, defines art autopoiesically (Maturana & Varela, 1980) as "a newness that emerges on the scene of culture due to dynamic forces that cannot be predicted or measured". (Hoekendijk, p. 21) Hence due to art's symbolic (Langer), encoded (Cubitt), self-generative properties (Perrella), a philosophic consideration of immersive art must assume the two-fold task of establishing an axiomatic aesthetic epistemology based on theoretical texts (of artists whenever possible), while testing them against my own artistic experiences by placing myself within the operations of immersive creations, thus raising questions of reciprocity between theory and practice.

Throughout the 20th century avant-garde artists-groups such as the Cubists, Russian Constructivists, the Dadaists, the Surrealists, the Letterists, Fluxus, the Happening scene, Minimalism, Conceptualism, and post-modern neo-conceptualists have all published their theories of art. (Stiles) Alike, as an artist/theoretician myself, I understand art theory to be a necessary intercourse between creation and reflection, conjecture and practice (Schapiro), and I realise how these apparent bipolarisms can complement one another handsomely. Although theory and practice might once have been seen as contradictory, it has long been the objective of some artists to develop their own theories of art.

In accord with our review of *totalising* concepts, the fact that the scintillating word *world*, or in some cases *metaworld*, is used when describing a VE's space poses a plurality of philosophical issues for deliberation. In real terms, the immersive space of VR is the non-space of computer memory, networks, telecommunications and digital media. However metaphors (comparisons) have a long history in even scientific thought, including the planetary analogy for atomic structure, the clockwork metaphor for the solar system, and the pump metaphor for the heart. Likewise the metaphor *world* seems to abound in descriptions of VR's insinuated immense, but fabricated, immersive space (Roehl); even as, literally, it is a non-space entirely circumscribed within the matrix of computer memories.

As example of this use of the metaphor *world* one might cite Jenny Holzer's VR pieces *World One* and *World Two* which she displayed at New York City's Guggenheim Museum's exhibition *Virtual Reality: An Emerging Medium*, which I saw in the Fall of 1993. This exhibition, developed in collaboration with the *Intel Digital Education and Arts (IDEA)* program, was the first exhibition of VR in an American museum. *World One*, which was developed with Ken Pimentel, placed the immersant into a cave-like techno-sphere in which one could interact with disembodied "souls", either by fleeing them or entering into a discourse with them. *World Two* (developed with Jeffrey Donovan and Tomandandy) placed the immersant into a bleak horizon of chambers in which one encountered verbal testimonies connected with the Bosnia conflict. (Ippolito, p. 5)



Jenny Holzer, *World Two*

For me this prevalent cyber metaphor *world* is fraught with philosophical significance and deserves to be inspected. In what sense is the prevalent use of the metaphor of world germane to describing computer generated, pixelated illusions of space, and not merely clichéd hubris? What is even more vexing is that static, geometric paintings are also called worlds today, as Peter Halley does with, for example, his painting *The Other World* (1992). To further the distorting metaphoric hyperbole, Halley's paintings have even been called "Virtual Realities", (Doner, p. 8) in that Halley asserts that all relationships are geometric underneath the veil of cultural mythology. (Halley) On reviewing these examples I have come to agree with Stacey Spiegel when she says that "talking about different worlds is problematic as it propagates the illusion of discontinuity". (Hoekendijk, p. 5) Perhaps it is more intelligible to speak of one (total) world where multiple realities simultaneously coexist, overlap, and interpenetrate.

But the question remains, in what ways do simulated VR arenas and computer generated faux spaces resemble our lived world (or not) which make the common metaphoric usage of the VR term *world* either appropriate or inappropriate? The search for the answer to this question will merit the initial emphasis on philosophical history which follows.

Connecting said VR worlds to each other telematically adds other speculative psychological flavours to the discussion but does not alter the need to analysis the singular VR world concept on which connected worlds are fashioned. (Loeffler) Such a consideration will be advantageous when rounding out the historical and philosophical assumptions of virtual worlds in researching the basis of a coherent theory of art which is especially informed by concepts and experiences of immersion in conjunction with the forgone conclusions established concerning the theoretical issues of sexual politics, multiculturalism, gender studies, and the far-reaching heterogeneous philosophical critique of the cultural mechanisms of representation, which will have preceded it.

When physics, biology and mathematical science began their metaphysical examination of heterogeneous systems (Burt), they initiated a break with Western Classicism and this bifurcation is what is found to be correspondingly interesting to an investigation into what might be called the rhizomatic model of the world. What is important in immersive terms about the rhizome model is that any point in a rhizome can be connected with any other point even while rhizomes remain heterogeneous. (Deleuze & Guattari, 1994) According to Gilles Deleuze and Félix Guattari, rhizomatic activity is boundless in its branching; thus rhizomatic reflection may cross wide chasms of psycho/optic space in an immersive situation as the most disparate elements and details may be linked. Moreover a rhizome is continually dynamic and is ceaselessly actualised by the arousal its dynamism produces and thus it is never in accord with some preestablished strategy or imposed configuration. The rhizome is regularly swarming itself into being as micro and macro factors attract. One cannot declare in advance what its limiting confines are or where it will or will not operate

nor what may become connected and tangled up in the rhizome's multiple dimensions because the connections do not inevitably plait common types together. Rather a rhizome's multiple dimensions instigate cross-overs between both the highest synthetic level and the slightest, most minute discrete distinctions. An immersive rhizome world would be a complication of perceptual vicissitudes so intertwined that it gives birth to different scopes of phenomenological macro-perception. (Deleuze & Guattari, 1994)

We must remember when reflecting upon immersive worlds rhizomatically, that in the human brain the cortex feeds-back to the thalamus a complex set of inhibitory controls which allow it to have a measure of control over what it is being fed, so as it does not become overwhelmed by excessive amounts of sensory input. However immersive worlds are always excessive in that their surrounding spatial incidents necessarily overwhelms the optic boundaries and hence fully reveals itself only little by little. It is precisely this latent excess (i.e., the insinuated informational intensity) of immersive worlds which defines immersive desire; a desire synchronous with the absolute partiality, inadequacy and incompleteness of our frontal perceptions. Hence immersive worlds are excessive in that the sheer informational over-abundance of *intense visual data distributed around one* prevents one from apprehending it all in a single intuitive act. Indeed, as Massumi reminds us, "intensity is the unassimilable". (Massumi, 1995, p. 88) Therefore the term *total-immersion* being used here in respect to virtual aesthetic worlds merits an explication as an *intense saturating abstract experience of latent excess* which implicates the bipolar spectator's instinctive responses by showering perception/cognition in an *implied excess of aesthetic information*.

We must, additionally, consider that VR takes place in a general media culture of massive electronic deluge where the mercurial reproduction of the free-floating (ineffable) signifiers of language, sound and images have blurred into a problematised complex/compound prodigality referred to as "information-overload". (Lilly, 1974, pp. 108-109) The velocity of human symbolic communication and the ability to co-ordinate human activity has reached the blurring speed of light (Davis & Meyer), a phenomenon which was described by Marshall McLuhan (1911-1980) in *Understanding Media: The Extensions of Man* as an *extension* of the anthropomorphic nervous system. (McLuhan, 1964) That was over thirty years ago. More recently Paul Virilio argued that the acceleration of the flow of information transforms our nerve-space not by extending it, but, by contrary, through what he calls optical technology's *shrinking effect*. (Virilio, 1991a) Here I am not in agreement with Virilio. Technologically stimulated immersive nerve-space is enduringly perceptually rich and significantly vast due to the essentially excessive perspectivism which immersion's latent/potential 360° surroundings offer. Immersive macro-perception challenges automatic frontal assumptions by *expanding peripheral rim alertness and heightening layered spatial attention*. The shift in perspective which it offers us through immersive spatial excess overwhelms and expands the confined spacio-rational threshold and floods it with optic input from the 360° view's middleforebackground, middlebackforeground, middlebackmiddleground, middlebackbackground, backforeforeground, backforemiddleground,

backforebackground, forebackground, foreforeground, foremiddleground, middleforeground, middlemiddleground, middlebackground, backforeground, backmiddleground, backbackground, foreforeforeground, foreforemiddleground, foreforebackground, foremiddlebackground, foremiddleforeground, foremiddlemiddleground, forebackforeground, forebackmiddleground, forebackbackground, middleforeforeground, middleforemiddleground in the holonogically mindful observer. This means that the full apprehension of the compositional order of an immersive space is never shrunken but always deferred and held in suspension until even more information is admitted. (Bryson, 1983, p. 121) Such a holonetric position is only plausible if the epistemological orientation for an immersive theory tends to be *a critical hyper-holonogic awareness based on the way that the immersive sliding-standpoints reorganise enhanced and mobile eyes towards an all-over orb that is less allied with frontality and more allied with omnidirectional peripheral visuality*. Such an expanded/extended visuality is a pivotal immersive cyber effect on human potentiality which Heim characterises as indicative of a current "epistemology of the peripheral" (Heim, 1998, p. 178): as immersants within cyberspace often experience an augmentation of corporal/sensorial powers by perceptually forgetting (through distraction/overwhelmment) the frontality of their body's eyes, by temporarily losing self-consciousness and by seeing their body representative peripherally as if from the outside as a mock-up cyber-puppet. (Turkle, 1993) As Heim points out, this artistically/technologically enhanced cognitive-vision of the peripheral (which "notices changes in the environment more quickly than central or spot perception") finds its "analogy in electronic tracking". (Heim, 1998, pp. 178-179)

Hence only conceptions of relaxed, dilated, scanning 360° eyes can adequately represent the insinuated visual potential suggested by hyper-real space and only transformative notions of the hyper-real peripheral eye (which is linked "more directly to the subconscious nervous system" (Heim, 1998, p. 179)) can accurately reflect the massive transformational effect of copiously webbed high-end immersive technology. Here we see the relevance of the concept of *peripheral excess* in analysing hyper-real situations, as it is discernible to me that only an excessive opulence which exceeds the borders of the simple non-decadent can offer an elucidation of our implied 360° puppet-eye afloat and mirrored in the periphery of homogeneous hyper-real data-space.

Hyper-reality is the name of the omni-territorial/excessive spatial presence felt when immersed within chimerical (usually inorganic) fabricated worlds (in VEs' case digitally fabricated) *when experienced with the full awareness of said artificially*. (Eco, 1986) Artistic, digital, immersive hyper-reality formulates unaccustomed experiences of space by fashioning optical excessive conditions that in one sense validate the modernist assumption of Western classical space (a space which is harmoniously homogeneous) due to the homogeneous digital (and telematic) obligatory codes and configurations. But in another sense, they are opposed to that fathomable homogeneous space through their inevitable unfathomable optical excess, an excess which calls for a 360° holonogic hyper-perception. Such a corrective/excessive holonogic hyper-real

opticality is indicative of the sensation of what in French is called *dépaysement*; the feeling of *being here now* but not knowing where here is. (Maubourguet, p. 320) In this way virtual aesthetic interests in optical excess may participate in the tradition of transcendentalism. (Boller)

The insinuated optical excess of immersive hyper-real *dépaysement* promotes also circumstances of dithyrambian excess when all-over ornamental qualities come into consideration in that the *dithyrambic* is that which is unmeasured, ornately circuitous, and rhizomatically flowery. In the optical excess of immersive hyper-real space, forms may enmesh and contradict, altering and disrupting the mundanity of communications in an inexorable and chimerical way. In psychological and neurological terms, such a dithyrambic excess is the opposite of a percipient deficit. While a cognitive deficit is an impairment of mental functioning preventing a complete representation of experience in consciousness, a *cognitive excess* is an *abundance of meaning*. As such it is antithetical to established norms of visual-cognition on principle. (Ricoeur, 1976) Such a dithyrambic visual hyper-logic has manifested in all modes of decadent artistic periods; from the Hellenistic and Flamboyant Gothic, to the Mannerist, Rococo, and Fin-de-Siècle, as they all opposed dogmatically imposed ocular paradigms with hyper-engendering strategies.

When the idea of simplicity takes on the intensity of a righteous injunction, the implied equation between simplicity and goodness obscures a less evident function: that of cognitive constraint. Such umbrage runs counter to what Georges Bataille (1897-1962) considered to be the non-hypocritical human condition, which he took as being roused non-productive expenditure (threshold excess) entangled with exhilaration. (Bataille, 1989) For the finest comprehensive overview of Bataille's thought in this regard, see his book *Eroticism* (along with Hollier's book on Bataille's general postulates, *Against Architecture*). Excess is, for Bataille, not so much a surplus as *an effective passage beyond established limits*, an impulse which exceeds even its own threshold. For Bataille, examples of non-productive excess/expenditure can be found (in varying degrees) in forms of luxury, lamentation, spectacle, art, poetry, erotic activity, and mystical endeavours; some of which place an emphasis on a loss that must be as great as possible in order for that activity to take on its fullest meaning. (Bataille, 1988b)

One consequential effect of immersive excess has been an emphasis in VR research on internal, phenomenological cognisant models (such as the psychological ego-centre, the character of the individual's mental field-of-view, and the subject's psychological motivational drive; factors which raise the felt intensity and hence persuasiveness of immersion) rather than on external, objective constructs alone (such as FOVs' and FOVg's span, size, and grade). (Beer) What has been determined is that the degree an immersant feels totally immersed in an optically excessive virtual space, depends to a large extent on personal psychological need and adaptability in accord with the proposed spatial depth cues. The cognitive-aesthetic space has to be co-ordinated phenomenologically with the proprioceptive space of the eyes. (Psootka, Davison & Lewis, p.72)

As I mention phenomenology here, I shall briefly relate what it is. Fundamentally phenomenology is a philosophy of experience but the term *phenomenology* is often used in a general sense to refer to "subjective" experiences of various types; thus it becomes relevant to an investigation of immersive artistic states, in so far as it is a descriptive science which covers the chief features of experience taken as a whole. It is, in this sense, the study of all possible appearances in human experience during which considerations of so-called *objective reality* and of purely *subjective response* are temporarily left out of account. (Spiegelberg) In the philosophical sense phenomenology begins to redress the alienation between objectivity and subjectivity (Arendt, p. 6) as initiated by Kant in his *Critique of Pure Reason* where Kant proposed that humans do not see the world objectively but rather see it through a number of ideal and subjective theory-laden categories. (Kant, 1965) Philosophical systems and aesthetic theories receive their standing as truthful and useful abstractions, through the human experience of the phenomenological relationship to the world. (Husserl, 1982)

More narrowly, phenomenology is a school of philosophy whose principal purpose is to study the phenomena of human experience while attempting to suspend all consideration of objective reality or subjective association. (Merleau-Ponty, 1952) It will be applied to immersive phenomena here as it inspects aspects of aesthetic cognition and perception. Historically, phenomenology is the philosophical movement initiated by the German philosopher (and teacher to Aaron Gurvitch) Edmund Husserl (1859-1938) in circa 1905 and his systematic study of consciousness from a first-person standpoint. Husserl's crucial contribution to philosophy was his methodical disclosure of how meaning emerges in our consciousness of the world by our becoming conscious of our internal rapport with the world. What is relevant to this discussion is Husserl's formation of a new field of experience, the field of *transcendental subjectivity*; which according to Husserl, incorporates a method of access to the transcendental-phenomenological sphere in which Husserl claimed his transcendental idealism advanced beyond common idealism, *beyond common realism*, and *beyond the very distinction between these two ideas*. (Husserl, 1982) With the advent of phenomenology rigorous studies of the working of consciousness were undertaken, most noticeably by the French philosopher Henri Bergson (1859-1941). (Bergson, 1969)

In terms of virtual worlds it is pertinent that Husserl should favour a spatial comparison when presenting his phenomenology, as the spatial comparison invites immersive investigation. Husserl maintained that his *transcendental phenomenological idealism* did not disavow the extant actuality of the material sphere, but instead sought to elucidate the sense of the world in contrariety to Immanuel Kant's *Critical Idealism* (which disavowed, through the faculty of the negating imagination, a discursive absolute as constituted in the sensual realm). (Solomon) As a discipline, *transcendental phenomenology* is allied not only with Husserl however, but also with other European philosophers, principally Martin Heidegger, Jean-Paul Sartre (1905-1980) and Maurice Merleau-Ponty (1908-1961). Their *existential phenomenology* departs however from the

transcendental phenomenology of Husserl in that it stresses the embodied nature of human consciousness and views bodily existence as the original and originating material premise of sense and signification. Merleau-Ponty tried, for example, to ground perceptual distinctions in post-World War II brain research and show that there were well-founded modalities by which human beings relate to things around them in the world. (Merleau-Ponty, 1952)

Merleau-Ponty's importance in immersive terms, is based principally on his texts *The Phenomenology of Perception* and the *Visible and the Invisible* in which he outlined much of modern ontology. In them Merleau-Ponty emphasised the structure of perception rather than the interior formulation of consciousness. His phenomenology is particular, also, in that he categorically affirms the reality of the world around us external to consciousness; therefore, much of his philosophy consists of a refutation of certain idealistic suppositions. (O'Neill) In doing so however, Merleau-Ponty discovered a new type of being which he came to call *hyper-being*. In *Phenomenology of Perception* he defined hyper-being as the *expansion of being-in-the-world*, an immersive hyper-real predilection. (Merleau-Ponty, 1952)

The *phenomenology of hyper-being in digital hyper-reality (when considered within the confines of its own supposition) accepts an infinite spatial potentiality as a metaphoric function of its own apparent vastness, a vastness which radiates out in 360° from a central immersant ego-centre*, even though one is literally always looking in front at the absence of physical distance at a feigned sunless sublime. (Barlow, 1990a) This virtual sublime, like all and every sublime, is founded on principles of wonderment and consternation. (Hertz) Indeed the term *sublime* specifically refers to an aesthetic value in which the primary factor is the presence or suggestion of undivided vastness and immense breadth of space which is unable of being completely ascertained. (Rucker, 1984)

The sublime concept first emerged as such as the topic of an incomplete treatise entitled "On the Sublime" that is believed to have been written in the mid-3rd century AD by Cassius Longinus (3rd century AD). The author of the treatise defines sublimity as: (1.) *excellence in language*, (2.) *the expression of a great spirit*, and (3.) *the power to provoke ecstasy*. (Longinus) The immersive sublime, from the combined point of view of Cassius Longinus' last two definitions, is apprehended and grasped as a totality while at the same time experienced as exceeding our usual lucidity, therefore provoking a sensation of awe (as recognised by Cassius Longinus). Centuries later the term was given special prominence by Edmund Burke (1729-1797) in his 1757 *A Philosophical Enquiry Into the Origin of Our Ideas of the Sublime and Beautiful*, one of the most popular 18th century treatises on aesthetics, translated into French in 1765 and into German in 1773. According to Burke, the sublime feeling (which contrasts with that of the beautiful) is caused by an admixture of terror, admiration, apprehension, and supra-attention. Burke maintained that the life of the spirit depends on this type of awe in agreement with the immense scheme of the universe. The sublime also stands in opposition to

the aesthetic concept of the *picturesque*, whose characteristics are luxurious intricacy and calmly poised diversity. The leading theorist of the picturesque was William Gilpin (1724-1804) with his 1792 *Three Essays on the Picturesque*. (Gilpin) In contrast, Burke attributes the sublime sense of pleasure/terror to a heightened tension of the nervous system which distances us from the state of calm indifference that is the normal condition of life. (Burke) Exactly because of this stimulation of the nerves, the sublime (as safe terror) is agreeably engaging, even as this psychologically intense feeling is bound up with our sense of mortality in an existential way similar to the terms of Jean-Paul Sartre's *Being and Nothingness*. (Sartre, 1968)

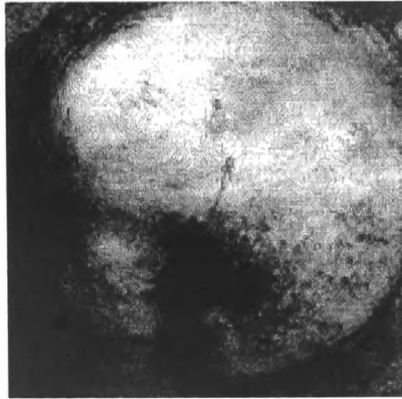
Burke's text was an operative influence on Immanuel Kant's 1790 *Critique of Judgement*, a text where Kant analysed the sublime in terms of our rational responses and where he distinguished beauty (which can be rationally perceived) from the sublime (which is an emotion invoked by the limitlessness). (Kant, 1960) Kant however, after confirming the Burkian sublime qualities as those which exceed perspicacious comprehension, rebutted Burke's conclusion by subsuming the sublime to a reaffirmation and an aggrandisement of the subjective self. (Hertz) Thereafter, akin reflections were articulated by the philosopher Friedrich von Schlegel (1772-1829). (Schlegel)



Caspar David Friedrich, *Voyage Above a Sea of Mist*

Consequently the German artist Caspar David Friedrich (1774-1840) painted solitary figures immersed in expansive vistas. Friedrich's paintings *Monk by the Seashore* and *Voyage Above a Sea of Mist* are good early example of what is meant by the sublime in painting. The small figure, immersed in a vast space, evokes a breathtaking incomprehension of the immeasurable, a sense of grandiose boundlessness, and an appreciation of one's own microscopic measure and cosmic irrelevance. Corresponding Friedrich were the English artists who also painted landscapes of sublime spatial infinity; Joseph Mallard William Turner (1775-1851) and John Constable (1776-1837). Turner's *Light and Colour* (1843) and *Snow Storm: Steamboat off a Harbour's Mouth* (1842) implicitly includes the viewer into the midst of a vortex of water, mist, and smoke. Certainly one of the most immersively telling aspects of Turner's work was when he lashed himself to the mast of a stormy ship at sea, an experience which provided him the sublime immersive ideal on which he based some

of his work. By contrast Constable painted visions of tranquil sublimity and placid equanimity which stressed an amicable co-existence with nature in a continuum of infinity, as evidenced by his 1821 large painting *Haywain*.



Joseph Turner, *Light and Colour*

John Ruskin (1819-1900) employed the term *sublime* in his *The Seven Lamps of Architecture*, which contains his most elaborate shaping of a theory of sublimity (Ruskin, 1849) and more recently Jean-François Lyotard, post-modern theorist and curator of the important *Les Immatériaux* (Immaterial) exhibition which was held at the Centre Georges Pompidou in 1985 (Lovejoy, 1997a, p. 161) defined a new *technological sublime of indeterminacy* as the exemplary basis of Post-Modernism. (Lyotard, 1984a)

Methodologically an emerging immersive theory must endeavour to achieve a discernible integration of this sublime state of copious formlessness into an analysis of artistic manoeuvres. This will be accomplished in Section B and in the conclusive Section C.

AIV: Immersive Metaphysical Awareness: Issues of Vastness and Intimacy

I feel that the world is at once inside my head and outside it, and the two, inside and outside, begin to include one another like an infinite series of concentric spheres.

-Alan Watts, *The Joyous Cosmology*

The instant of creative spontaneity is the minutes possible manifestation of reversal of perspective. It is a unitary moment, i.e., one and many.

-Rail Vaneigem, *The Revolution of Everyday Life*

Under the pressure of the technological revolution we have been compelled to review our conceptions of structures and operational modes of desires and corporal signs, and their corresponding dimensions in the imaginary, the symbolic and the real.

-Peter Weibel, *The Picture after the Last Picture*

...the infinite. I once longed to compile its mobile history.

-Jorge Luis Borges, *Labyrinths*

A subtle chain of countless rings

The next unto the farthest brings

-Ralph Waldo Emerson, *Nature*

The philosopher Don Ihde has scrutinised technology by arguing, not surprisingly, that human consciousness is changed by the utilisation of it and that technologies *amplify* or *reduce* consciousness in various ways. (Ihde, 1979, p. 53) However the *desire* for an amplified or reduced consciousness, I maintain, necessarily pre-dates the existence of the technology, or it will simply be ignored. In his definition of four-dimensional space (Henderson) in the *Tertium Organum*, Peter Demianovich Ouspensky (1878-1947) shows us that as our consciousness changes and develops, our sense of space changes and develops also; that the dimensionality of our world depends on the development of our consciousness. Space is the multi-dimensional mirror of consciousness, according to Ouspensky. (Ouspensky)

In terms of how immersive technology affects consciousness, I have detected that there are two initially distinct types of immersive psychic space in VR (even though this simple division must be partially obscured by a number of other, in part, overlapping spectral distinctions). Nevertheless there is, generally speaking, *cocooning* and there is *expanding* immersive psychic space involved in immersion. *Cocooning immersive space* is when we feel immersed in a sealed, sheltered, enclosing space; the psychological fortificational remnant of the fusion between mother/me. (Stern) *Expanding immersive space* is when we feel immersed in a defamiliarised, unrestrained, and expansive space; the psychological prominence of a discovered me/universe fusion. (Watts, 1973) In VR, expanding immersive space is felt (paradoxically given the restraints of the display hardware) when the ontological subject feels surrounded by the vastly stretched edges of the digital space's parabolic frame (Barlow, 1990a) and thus psychologically moves into an extensive, cupola-like, immersive orb. As a pre-VR example of an expanding spatial consciousness tool, we may turn to Philip and Phylis Morrison's book *Powers of Ten* (Morrison & Morrison) or the eight minute

film/video based on the book (made in two versions: 1968 and 1977 and now re-tooled as a CD ROM) by the important American designers Charles Eames (1907-1978) and his wife Ray Eames (1916-1988) which takes us on an excursion across 43 orders of magnitude. It starts by observing a picnicking couple in a park in Chicago and subsequently zooms out by the power of ten to the outer reaches of the universe. Thereafter, it zooms back into the picnic, penetrating the hand of one of the humans and in conclusion ends up in an artist's conception of subatomic particles in the nucleus of an atom. Hence it puts all of our ensuing observations in the context of the many orders of magnitude which make up the full range of the universe.

Technically it employs the artistic procedure of latent excess by showing viewers more than they can absorb in the time allowed, as images are a fraction too short to imprint on the mind's eye but not so short as to be subliminal. In this respect, immersive expansive exploration into immersive states (levels) warrants the term *excessive topophilia*, for it seeks to determine the value of an open space which refuses to be simply comprehend. (Eco, 1989) In expansive immersions, cocooned psychological space becomes sublimated and thereby has the capacity to convert individual unconscious imagination (i.e., artistic urges) into expanded art via an externalised fancy midway between restrictive reality and wish-fulfilling inception.

When I use the terminology *expanded* here I am referring to the rich meaning given to it by Gene Youngblood in his book *Expanded Cinema* as that which transgresses and exceeds the customary boundaries of our optic encounters. When Youngblood discusses what he calls "expanded cinema" he refers it to an "expanded consciousness". (Youngblood, p. 41) Such a predisposition towards expansion counters Neil Postman's valid point that "embedded in every tool is an ideological bias, a predisposition to construct the world as one thing rather than another, to value one thing over another, to amplify one sense or skill or attitude more loudly than another". (Postman, 1993, p. 13)

That expanding immersive consciousness is a natural, as well as virtual, phenomenon seems hard to dispute as it is also an extraordinarily salient part of being spatially conscious within vast, open, natural settings (from where the virtual simulation draws its secondary associative powers). Still Youngblood's emphasis on expansion in terms of art is a wonderfully pliant metaphor when addressing that aspect of virtual immersion which seems to provide a rainbow-bridge between an individual's cocooned immersive micro-perceptions and the vast expanses of non-figurative space. In this sense certain projects of the previously mentioned Knowbotic Research KR+cF group, such as their *Simulation Mosaik Data Klaenge* project and the *Dialogue with the Knowbotic South* project (Atzori), are exemplary. Knowbotic Research KR+cF have theorised this sense of vast non-figurative space in virtual terms as the "incomprehensible dimension" where "numerous constellations (layers) of events" occur. (Knowbotic Research KR+cF, 1995, p. 1 in the unnumbered Introduction). They go on to say (on the same unnumbered page) that such an awareness of vast non-figurative space requires us to "part with our two-dimensional imagination and three-dimensional

reconstruction habits, challenging us to develop an abstract multidimensional imagination instead". More will be said on Knowbotic Research KR+cF's important work in BXXIII.

By vast non-figurative space I am referring also to that non-anthropomorphic awareness of space as outlined in Freeman Dyson's book *Infinite in all Directions*. Here Dyson explains that we exist immersed in a spatial omni-unboundedness. (Dyson) So does John Gribbon and Simon Goodwin's book *Origins: Our Place in Hubble's Universe* which, especially when read in tandem with the Dyson book, conveys the overwhelming impression that we are closer to everything/nothingness (Nishida, 1987) than we generally imagine, here on this beautiful planet of a fourth-division star's solar system in a universe 15 billion years old. (Gribbon & Goodwin) When proportion is extended to that degree, all reductivist theories pale in favour of an enhanced awareness of immersive expansion in service of an expanded ontological understanding of spatial unity. (Koyre)



The Helix Nebula

Walter Stace however divides the concept of undifferentiated unity into two different ways of experiencing it: into internal and external ways (nearly cocooning and expansive in my terms). The cardinal difference between the two, according to Stace, is that the internal way finds unity through an inner world, while the external way finds unity through the external world. (Stace) However, I do not find these two positions mutually exclusive. Indeed what came to my attention through my allocentric virtual experience was the conflation of these two ways of conceiving concordant space. Thus what I think immersive art (and particularly virtual immersive art) can do pretty well, is to define the membrane between these two ways. Correspondingly, we can accentuate the dialectic between cocooning immersion (with its psychic task of protecting) and expansive immersion (with its psychic task of enlarging) or we can return to the proper sense of undifferentiated unity and cast out the difference, if we view these two types of immersion as waves in the rhythms of a mirrored immersion which extends in both directions well outside the personalisation of the individual. Through the examples cited in Section B of this text we shall see how beatific aesthetic environments act upon both inner and outer psychic space through an exaltation which unites the two psychic immersive poles: (1.) cocooning (that psychic space which concentrates and protects in comfort and safety) with (2.) expanding (that enthused

psychic space which opens up perception and cognition and expands it out into the total field of vast space); in a way which reinforces Gilles Deleuze's statement that "the interior is only a selected exterior, and the exterior, a projected interior." (Deleuze, 1984, p. 125)

Concerning the mirroring of the total field of vast space, in his brilliant book *Poétique de l'espace* (The Poetics of Space) Gaston Bachelard (1884-1962) speaks of the French poet Charles Baudelaire's (1821-1867) frequent use of the word *vast*, which is, Bachelard claims, one of the most Baudelairean of words: the word that marks naturally, for this poet, the infinity of intimate space which I referred to above. This, at first seemingly paradoxical statement, is correct, for Baudelaire is above all celebrated as a poet and practitioner of *double consciousness*: incarnating two intertwined natures. Apparent polar opposites play against (and ultimately with) each other dialectically in his thinking; such as the themes of the naked and the adorned, the female and the male, Venus Blanche and Venus Noire, and of course even more non-sensibly opposed, flowers and evil. (Sartre, 1949) It is this Baudelairean *tension in resolution between two ostensible opposite spatial directions* which informs the integration of cocooning and expanding understandings of immersiveness here. Moreover, Baudelaire's theoretical writings were, like within the rhizomatic model, based upon the flexibility of a multiple/unified acuteness in general. (Baudelaire, 1966)

Bachelard says of Baudelaire's word *vast* that when one has become hyper-sensitive to this word, one sees that it denotes attraction for felicitous amplitude. Moreover, if we were to count the divergent usage of the word *vast* in Baudelaire's creative writing, we should be struck by the fact that examples of its detached use are rare compared with the instances when the word has more intimate resonances. Whenever a manifestation, a consideration, or a fancy was touched by grandeur, this word became indispensable to him. (Bachelard) For example, in Baudelaire's *Le Mangeur d'Opium* (The Opium Eater) the opium eater must have a vast amount of leisure to derive benefit from his soothing daydreams. (Baudelaire, 1966) Bachelard says that it is no overstatement to say that for Baudelaire, the utterance *vast* is a metaphysical contention by means of which *the vast world and vast thoughts are united*. But truly this grandeur is most active in the realm of intimate space (cocooning immersive space), for this grandeur does not come from the spectacle witnessed, but from the unfathomable depths of vast thought. This corresponds to a melting of the individual's limits, which were formerly sharply outlined, in favour of a new organisation of awareness which Emanuel Swedenborg (1688-1772), principally, furnished Baudelaire. Swedenborg's unitary theory provided the metaphysical basis for many artists of Romanticism, including Turner, Constable and Friedrich. Swedenborg posited that matter consists of particles that are indefinitely divisible, and that these particles are in constant vortical (swirling) motion. Furthermore, these particles are themselves composed of smaller particles in motion, an idea which strongly resembles the modern conception of the atom as described in terms of a nucleus and its electrons. Moreover, Swedenborg wrote voluminously concerning what he saw to be the correspondence between the spiritual and the material planes (i.e., the viractual) and he consistently maintained that there was an infinite,

indivisible power to life; an idea which reinforced the neo-Platonic sublime ideals of Romanticism thoroughly. (Synnestvedt)

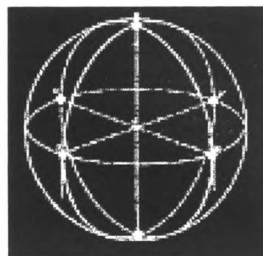
Romanticism (circa 1795-1840) - the cultural movement inspired by the writings of Edmund Burke and the French philosopher Jean Jacques Rousseau (1712-1778), among other - focused on individual passions and inner struggles and hence produced a new outlook and positive emphasis on the emotional artistic imagination which became perceived as a gateway to transcendent experiences of unity. Bachelard says of Baudelaire's Romantic notion of vastness that the exterior spectacle (i.e., expanding immersion) helps intimate grandeur unfold (i.e., cocooning immersion) and that the word *vast* for Baudelaire is the word that expresses the highest synthesis, as vastness has no delineation. For Baudelaire the word *vast* reconciles contraries, for example in the line "As vast as night and light" in a poem about hashish which Baudelaire wrote in *Les Paradis Artificiels* (Artificial Paradises). (Baudelaire, 1966) Bachelard points out how Baudelaire's use of the concept *vast* implies deep and somber concord and a readiness to amalgamate dislocated profusion. (Bachelard) Consequently, it is through Baudelaire's thoughts on vastness that we discover that the immensity of the intimate domain is *revealed through intensity* (now understood as Massumi's already mentioned "unassimilable" (Massumi, 1995, p. 88)); for *an intensity of concentration in union with openness is a prerequisite to feeling the richness of immersive experiences themselves*. This intensity of being involved in a vast and immense perspective (in for example a 360° FOV VE) offers not only an opportunity for visual perspective expansion and placement dislocation, (or Knowbotic Research KR+cF's non-locations (Hoekendijk, pp. 3-8)) but perhaps even more importantly, a correspondence to the intensity of our intimate (cocooned) being. Thus VR's potentially unencumbered total and expansive immersive space can be an agency of transaction between the immensity of non-figurative external vastness and the intensity of our intimate private being. For if we take Baudelaire's meaning of the word *vast* and apply it to our own personal life-world (that process which is taking place between us organisms as well as within us) we can sense and comprehend how his particular utilisation of the word addresses both cocooning and expanding immersive space. Through Baudelairean vastness we can see how both notions of *in* and *out* (of the edge/frame) are contained in a potentially unimpeded complex mirrored amplitude that deepens both the inside and the outside because they both extend as part of a vast potentially unfettered bi-directional scope. In virtual-immersion, potentially unimpeded vast opposing directions lose their position and meet in an enhanced rhizomatic/holonogic cognitive-ocular space of circling connectivity.

This immersive rhizomatic/holonogic cognitive-ocular-psychic condition, then, involves the exaltation of the void and the melting of frontiers as it expands both inwardly and outwardly, to envelope from both sides a felt understanding of the potentially unfettered immensity and myrrh of the universe. Hence the two kinds of immersive space (intimate cocooning and exteriorised expanding) encourage each other, as it were, in their mutual growth. Thus *the spatiality of aesthetic immersion is a space which goes from deep intimacy to*

infinite extenuation. (Rucker, 1984) It is through the ideas of vastness and excess which I found in immersive art, that these two categories of immersion (cocooning and expanding) blend, for when the two immensities touch, run over, and become akin, human comprehension both deepens and amplifies. Then (as fostered by immersive art) we really are capable of entering into the expansive constitution of our being. (Von Foerster & Zopf)

Immersion, when conceived and lived in this mirrored immensity, is by necessity an instrument of excess as all reflection is foreordained to amplify omni-spatially, setting up an implicit metaphysics of mirrored (double to infinite) expansion. This double to infinite mirrored expansion includes, of course, multiple organisations of spatial thought which exceed expectations of verisimilitude. Thus the investigator of artistic immersion must follow the immersive state in both directions without reducing ever the extremism of the immersive phenomenon, but rather let this extremism grow within the macro-perceptions of immersive-holonogic consciousness fully.

Such an immersive richness suggests the fluidity and ephemerality of an expanding but centred mirrored-being (Berman, 1983) and as such connotes an ontological reflexive inclination based on expanding complexity: the presumed essence of vitality. (Waldrop) This centred vitality might be described, as John Cage (1912-1992) suggests, as "central to a sphere without surface, (...) unimpeded, energetically broadcast (...) as transmission in all directions from the field's center". (Cage, 1966, p. 14)



Hence with Cage's help we have a sense of immersive space originating in a centre (our consciousness) and both radiating outward and inward; aligning our consciousness with the presumed holistic traits of absolute space. (Lefèbvre) By examining the cocooning and expanding rhythms of our psychic space through the various spheres of immersion we might conceptualise, with the help of art (and identify thereafter in life), the edges of the frame of our cognition (the frame semi-forced on us by the social and psychological conditioning of empiricist/positivist philosophy (Comte)) and really feel the finer levels of immersion as they reveal themselves to our more exquisite sensibilities. Because we never succeed completely, immersive consciousness is tragic. Because we never stop trying, immersive consciousness is comic.

AV: Idealistic Postulates Behind Immersive Contingency

Every individual is constantly building an ideal world within themselves, even as their external motions bend to the requirements of soulless routine.

-Rail Vaneigem, *The Revolution of Everyday Life*

To overturn Platonism: what philosophy has not tried?

-Michel Foucault, *Theatrum Philosophicum*

The world and life are one.

-Ludwig Wittgenstein, *Tractatus Logico-Philosophicus*

The cinema is an idealistic phenomenon.

-André Bazin, *The Myth of Total Cinema*

We know quite well how all ideals, how all symbols in fact, can be readily adapted to fit the dictates of social power. (Foucault, 1975) However, we also know that ideals are indispensable in creating possibilities for change. (Berber, 1969) Accordingly, I must discuss briefly the existence of another subtle set of supposedly dialectical oppositions: *realism versus idealism*, which my thesis brushes on.

In philosophical terms, *realism* is fundamentally subordinate to the assertion that reality is distinct from thought, while *idealism* rests on the contention that we can only comprehend in terms of abstracted representations and as such idealism holds a problematic relationship to material reality. In my view, based on what has come before in defining immersive consciousness, these oppositions cut across one another within total-immersive models; a view which compliments Edmund Husserl's original intention to go philosophically beyond the incessant binary choice between idealism and realism in the formation of his phenomenology. (Husserl, 1982) If we amend this division within a conceptual homogeneity, as Husserl and I have attempted to do, I believe we are much closer to the truth of the matter as concerns the experiential levels of aesthetic immersion.

Immersive VEs are emblematic ideal non-spaces given their sealed holistic constitution as all representations of the corporeal, if desired, can be removed from the space *with no visible vanishing point and no horizon*. Hence they are, in Heim's assessment, a form of "Platonism as working product". (Heim, 1998, p. 105) Given the preceding discussion of non-figurative external and inner Baudelairian vastness, the co-constitutive, reversible, mercurial relations betwixt electronic immersive technologies and the disembodied affect encountered at times in immersive hyper-space (Barlow, 1990a) invites an investigation of homogenous idealisms and their place in immersive art, even while acknowledging that the notion of an *ideal* is far from unproblematic. Moreover, the task of the philosophically-based theorist of immersive art is to determine (speculatively) just what the ideal goals and objectives of immersive art are (or might be) so that specific synthetic-immersive-creations may be compared to whether they contribute to the fulfilment of such ideal

ends, or omit, or even hamper them. Thus they must first be identified clearly. After two and one half years of intensive research I can state with assurance that the ideal, formal, constructional VE visual objective is *360° omni-spatial, holonomic optic range*. How this ideal end impacts on ontological realities, we shall now attempt to see.

Total-immersion into a computer generated data-space, and the impression of precisely and fully *being there* (presence or telepresence), is customarily proclaimed to be a consequential feature (while also being the ideal goal) of the Virtual Reality experience. (Heim, 1998, pp. 17-19) Indeed total-presence (or at least the more presence the better) is considered the defining characteristic of a good VR system. (Psootka & Davison, 1995) However this proclaimed feeling of *being there* is in no way a simplistic unproblematic occurrence. The general impression when feeling *present* within an electronic scene is that of *existing (totally and fully within total-immersion) within a pervasion dispersion*, as electronic presence is intimately bound-up in a cerebral, network-like, spread of immediate stimulation mixed with docility. How immersed one feels appears to be determined by a compound collection of corporeal components in agglomeration with the surroundings; as yet an inadequately understood psychological processes. (Ray) However, there appear to be two psychological factors dominant in predicting the depth of immersion in a simulated world. One is the *imagination* necessary to accept another reality and to participate in it fully and satisfactorily. The other factor depends on the *concentration, attention and self-control* needed to shut out the distracting effects of the real world in order to enter another world apart. (Psootka & Davison, 1996) But the question of how pre-VR concentrated/imaginative acts became embedded in the genealogy of VR technology so as to affect VR's underpinnings and perceptual disposition is not so immediately evident.

While reflecting on the above during the first week of July 1997, I, along with most of the world, watched the Pathfinder Mission's telematically controlled robo-eye scuttle across the surface of Mars (some 191 million kilometres (118.42 million miles) from earth) to observe and record its barren terrain. With the incredulity of the once fairy tale-like roving telematic star-eye removed, our ideal (and extant understanding) of vision was dramatically altered in favour of the once fictional farfetched. In that issues of imagination and fictionality apply to the sense of presence in a VE, pertinent is John Ronald Reuel Tolkien's (1892-1973) account of how fiction works. According to Tolkien, when a writer's art is good enough the writing produces in the mind a predisposed suspension of credulity. This mental state entails an enchanted subsidiary suspension of disbelief which, according to Tolkien, unleashes an unencumbered, mobile, detached, inner-eye. Tolkien points out however that a suspension of disbelief in favour of idealised assurance is not all there is to it. What particularly happens in the closing of that plausibility gap is that a *sub-creator* (the detached inner-eye) appears inside of the idealised consciousness and creates a *secondary world*, one which may now be competently encroached. Inside this secondary world what is proposed *becomes true* as the proposition accords with the inner laws of that world. The proposition is believable so long as one is inside the idealised

totality of this secondary world. With misgiving, that hex is broken and the art fails to produce the secondary world state of mind any longer and one is released back out into the *primary world*, gazing at the beguiling secondary world from outside of its idealisation. (Tolkien, p. 37)

Along these lines, Dr. John Suler in his on-line essay "Cyberspace as Dream World" speaks also of primary and secondary mental worlds and reminds us that psychology has mapped out many of the mental components of dreams and other altered states and labelled them *primary process*, a style of thinking and experiencing that is quite different from normal waking states of consciousness (called *secondary process*). (Suler) Regardless of which world is deemed primary, the important thing is that we recognise the existence of psychic immersive worlds, complete with boundary frontiers which may be breached. When immersively active, the psyche immersed in a hypothetical world eclipses momentarily the "normal" world (Suler's secondary process) where idealistic implication attains ontological actuality. The immersant is no longer in front of an image (mental or graphic) *but inside of it*, self-positioning being temporarily within that feigned and ideal world.

This operation concerning the production of internal idealisms pertains to immersive art, in that idealism - as defined from the perspective of art history - generally maintains that the artist should not strictly chronicle the world as seen, but ought to ameliorate it by favourably selecting a supposedly superlative ideal, thus improving upon nature. The philosophical justification for this brand of artistic idealism comes from Plato's *Theory of Ideas*, whereby the forms we see in this world are but imperfect versions of the true forms of the mind. (Barasch) In real terms, the Greek ideal of human beauty and proportion was arrived at by a process of selection between different types of men and women, a strategy of discrimination and differentiation. (Martin, T.)

In contemporary Western culture the ideal model of life has, broadly speaking, taken on the form the celebrated pseudo-sexy/rich lifestyle of the media celebrity/sex-symbol/star as depicted through their image merchandising in the mass media. (Chomsky, 1988) Idealism in art however is a venerable aesthetic temperament which was frequently advocated during the Renaissance. (Strong, 1973) The application of idealism to the realm of art by artists and art theorists is bound up with the classical art tradition as taught in the European art academies through to and including the period of Romanticism (circa 1795-1840), thus spurring the development of subsequent neo-classicisms.

Philosophic idealism attempts to account for all objects as representations of the mind based on the early idealism of Plato where Plato conceived of a world in which external *Ideas* constituted reality. Indeed an early immersive metaphor is the celebrated Platonic cave. (Deleuze, 1990, pp. 253-266) In philosophy, the suggestion that sensory perception is frequently, some would say always, illusory has come to be known as

the *appearance-reality distinction*. This distinction, readily embraced by Plato, is believed to have been first suggested by the Pre-Socratic Greek mathematician/philosopher Thales (625-547 BC). (Stove)

Generally, idealism in philosophy means *monism*, a notion which maintains that everything is based in the mental. The two philosophers most closely associated with such an idealism were George Berkeley (1685-1753) and Georg Wilhelm Friedrich Hegel. (Nauen) The idealism of George Berkeley maintains that our impressions of the world come only from the individual's consciousness. His type of idealism was a variety of *total monism* in which everything is mental. As such it stands in contrast to *materialism*.

In 1709 the young Berkeley published his *Essay Toward a New Theory of Vision*, an examination of visual consciousness, in order to prove that visual consciousness affords no grounds for belief in the reality of the objects apparently seen. In 1710 he published *Principles of Human Knowledge* which presents his theory of *subjective idealism*, for which he is best remembered. Berkeley's subjective idealism holds that there is no existence of matter independent of perception. In Berkeley's monistic metaphysical position, nothing, including material objects, exists apart from perception. External objects are ultimately collections of ideas and sensations.

However the actual term *monism* was first used by the previously mentioned German philosopher Baron Christian von Wolff in his discussions of the mind/body problem to depict both camps of philosophers: those who only acknowledged the mind (the idealists and/or mentalists) and the philosophers who only acknowledged the body (the materialists). The mind/body problem is, simply put, the quandary over how the mental and private (separated from the physical world) can relate to the physical world. (Fodor, 1981) Wolff emphasised that every occurrence must have an adequate reason for happening or there arises the impossible alternative that something might come out of nothing. He applied the rational thought of the Anglo-French Enlightenment and of Leibniz and René Descartes (1596-1650) in the development of his own philosophical system. Indeed Cartesian *dualism* is the starting point of the mind/body problem. (Damasio) The Enlightenment's core period is the second half of the 18th century, but its major theme, the belief in rational science and the experimental method (Horgan), originated in the 17th century with René Descartes' critical rationalism and Francis Bacon's (1561-1626) advocating of the deductive scientific method. (Stewart)

The meaning Wolff originally intended by the term *monism* has broadened in scope through the centuries (mainly through its influence on Kant) and today applies to any doctrine or theory that claims that all things, no matter how many or of what variety, can be traced to one unifying process or quality. A rejection of monism forces the repudiator into a commitment to either the two-fold or the manifold. *Total-monists* maintained that everything is part of a single system, a stance best exemplified by Baruch Spinoza (1632-1677), the philosopher who merged mind and matter into one virtual substance. (Deleuze, 1970) Indeed as

Massumi points out through his reading Deleuze's *Difference and Repetition*, Spinoza's philosophy is distinguished by the "notion that *ideality* is a dimension of matter (also understood as encompassing the human, the artificial, and the invented)". (Massumi, 1995, p. 97) On the other hand, *monist materialists* integrate mind into matter by saying that everything is based in the material and physical, just as *immaterialist monists* do the opposite by merging matter into mind. *Attributive monists* maintain that, although there may be many distinct substances, they are all attributes of a single one. (The Internet Encyclopedia of Philosophy)

More widely recognised is *German idealism*, a phase of intellectual life that had its origins in the Enlightenment as modified by German conditions. The Enlightenment started as a French philosophical movement in the 18th century which celebrated reason over passion and the environment. As Theodor Adorno and Max Horkheimer (1895-1939) have shown, along with the Industrial Revolution, the Enlightenment was the movement occasioning the profoundest change in the mind-set of the largest number of people in the West since the ascendancy of the Christianity over Paganism. (Adorno & Horkheimer) However, if the Enlightenment succeeded in reducing Christianity from its position as the dominant monotheism of Europe to a secular moral metaphor, it was not until the late-19th century that the so-called *black arts* began to be tolerated, and then only in socially innocuous forms. This is pertinent to our discussion in that black magic rejects both the desirability of totality within the universe and any (in its view) self-deceptive antics designed to suggest such an idealism. (Denning & Phillips)

By giving precedence to sensation, English and French thinkers of the Enlightenment developed into empirical sceptics; viewing the world as a rational machine. By contrary, thinkers in Germany gave concept precedence over sensation, and, instead of empiricism, idealism dominated. (Royce) In place of the mechanical conception of the world, an organic-dynamic view was upheld and interpreted teleologically. This was made possible as Immanuel Kant's scepticism had tarnished the influence of empiricism and thus set the stage for an idealism which brought into question the value of the cultural ideals of the Enlightenment, impelling thinkers and artists to seek the basis of culture in the creative powers of the mind. (Kant, 1965) Indeed, German idealism usually means the philosophy of Immanuel Kant and his immediate followers. The basis of the *aesthetic idealist* movement, which manifested in the art and poetry of the period, was largely Kant's *transcendental idealism*. Kant had upheld that the phenomenal world is produced *a priori* by the activity of consciousness reacting on an external reality which cannot be known. (Savile, 1993) The constancy of experience is accounted for by the very fact that the world as we know it is only the sum total of phenomena. (Levinas) This becomes the basis of the universal validity of certain principles of explanation, for example space and time become subjective and thus ideal. Taken together they form a mould in which we shape the impressions coming from an unknowable, transcendent reality. (Nauen) Thus with Kant the imagination is celebrated as a "creative transforming of the real into the ideal". (Kearney, 1991, p. 4)

Gotthold Ephraim Lessing (1729-1781) was the first representative of the transcendental idealistic movement to articulate an inner aesthetic development of the mind. Thus Lessing situated idealism directly in aesthetics. Thereafter, the German librarian and archaeologist Johann Joachim Winckelmann (1717-1768) applied transcendental idealistic ideas to the visual arts. The great representatives of the transcendental idealistic mind in German poetry were Johann Wolfgang von Goethe (1749-1832) and Friedrich Schiller (1759-1805), both of whom experimented with the totalising aesthetic ideals of the *gesamtkunstwerk* (total-artwork), a key idealistic concept in the arts which shall be discussed at length shortly.

On the basis of Kant's transcendental deduction Friedrich Wilhelm Josef von Schelling interpreted the process of development in a purely ideal manner, as the unconscious opposition of the *absolute* to itself. Schelling, whom H. D. Schenk in his book *The Mind of the European Romantics* characterises as being "self-intoxicated on metaphysical speculation", worked out his *identitätsphilosophie* by extending to consciousness the view that *conscious subject and object are identical*. (Schenk, p. 178) The sum-total of existence then becomes the absolute as perceived by itself. With Schelling the absolute comes to consciousness in order that we may enjoy the pure aesthetic contemplation of the unity of mind and nature. (Nauen) It should be remembered however that already by 1800 many spheres of life had proclaimed their independence from religion, as politics first exerted its autonomy followed by economics and science; a trend which lead up to Théophile Gautier's (1811-1872) celebrated declaration of the *l'art pour l'art* (art for art's sake) ideal in his 1852 poetic book *Emaux et Camées*.

The immediate result of the aesthetic-metaphysical system of Schelling was a revival of the poetic production known as Romanticism. (McGann) I use the term *poetic* here in the sense that the romantic image of the poet/artist was, above all, that of a highly-strung bundle of nerves, excited by the senses to peaks of imaginative enthusiasm that can be read as the apex of the era's artistic temperament. (Baudelaire, 1868) Theodore Géricault (1791-1824) and his disciple Eugène Delacroix (1798-1863) best characterise this inclination in French painting.

The union of poetry with a metaphysical view of life became a recognised principle of art under Romanticism and it was this combination that secured for idealism ascendancy over the narrow naturalism and rationalism of the Enlightenment. (Honour) That that idea in Romanticism holds application to our concern with the excessive attributes of immersive space, can be made readily clear by one of Romanticism's initial and most penetrating critics, Søren Kierkegaard (1813-1855), when he noted already in 1836 that Romanticism "implies the overflowing of all boundaries". (Schenk, p. xxii)

The leading post-Kantian philosophical influences in the German idealist/romantic movement were Schelling, Friedrich von Schlegel, Johann Gottlieb Fichte, Hegel, and Novalis (the *nom de plume* used by Baron Friedrich Ludwig Von Hardenberg) (1772-1801), but many others took part in various ways. (McGann) Fichte likened God to the natural world's unified but shifting magnificence as before vastness Fichte sensed the overwhelming wonderment allied with the Supreme. As a result, Fichte took the concept of the *monad* from the *monadology* of Gottfried Wilhelm Leibniz as the model of a system embracing *unity in plurality and plurality in unity*, as he sought to fuse extreme spiritualistic monism and extreme pluralistic realism into what he called *concrete theism*. (Fichte, 1992) Leibniz had defined a *monad* as an *ever-changing set of representations created internally as a result of perceptions*. In immersive terms this monad concept equates with the idea of an apropos mixture of unity and variety as being the investiture of the immersive aesthetic.

Leibniz, an esteemed diplomat, mathematician, philosopher, and historian is unequivocally the foremost German thinker of the 18th century (Kant being generally reckoned among 19th century philosophers). (Jolley) As a philosopher Leibniz exhibited a many-sidedness which characterised his mental activity in general. His most relevant books to our concerns are *De Arte Combinatoria* (On the Art of Combination) from 1666, *Discours de Métaphysique* (Discourse on Metaphysics) from 1686, and the celebrated (by the late-20th century French philosopher Gilles Deleuze (Deleuze, 1993)) *Monadologia* (Monadology) of 1714. Leibniz's considerations were capacious and his convictions eclectic, in that his aim was not so much that of the thinker who wished to found a new system of philosophy, as that of a philosophic attaché who would propitiate all existing sparring systems by demonstrating their essential harmony. Leibniz therefore resolved to utilise everything that the human mind had up to his time achieved, and thereby to discover unanimity where antithesis and inconsistency seemed to reign. (Jolley) Leibniz is relevant here for the magnitude of his thought and his philosophical reflections upon possible worlds and principles of unity. In Deleuze's words, "Leibniz innovates when he invokes a profoundly original relation among all possible worlds." (Deleuze, 1993, p. 59) A bit more on Leibniz's monadology will be said at the closing of AVII.

The uppermost post-Kantian representative of German idealism however was Arthur Schopenhauer (1788-1860) who blended the perennial Platonic idea of the phenomenal *world as an idea* with that of a *universal will*, which Schopenhauer interpreted as illogical and aimless. Schopenhauer stressed aesthetic contemplation as the means towards achieving a state of suspension of belief which freed the mind to contemplate this aimless life, and he, post-structuralist-like, maintained that "we can never arrive at the real nature of things from without" in that "we can never reach anything but images and names". (Schopenhauer, 1907, p. 127) Following Schopenhauer, the German philosopher Karl Robert Eduard Von Hartmann (1842-1906) attempted to unite the *idea* of Hegel with the *will* of Schopenhauer in his doctrine of the *absolute spirit*, or, as he preferred to characterise it, *spiritual monism*. According to Von Hartmann the world is produced by will and idea, and consciousness, instead of being elementary, was seen as unintentional and unconscious. (Schenk)

AVI: The Holonsthesiatic Gesamtkunstwerk

Humanity became human when it made art to communicate consciousness.

-Georges Bataille, *Lascaux: La Naissance de l'Art*

A human being is part of the whole, yet thoughts and feelings are experienced as something separated from the rest, which is a kind of optic delusion of consciousness.

-Albert Einstein, *Ideas and Opinions*

Our field of consciousness has an undeniable holistic quality.

-Thomas Metzinger, *Conscious Experience*

...nothing exists apart from the whole!

-Friedrich Nietzsche, *Twilight of the Idols*

Since I am using the term *ideal* in the title of my dissertation I felt it necessary to convey rapidly here the history of the concept of the *ideal* in order to proceed. However for my purposes I wish to reject ideal types of perfect rationality (which factors necessarily constrain) so as to foreground and espouse the cognitive operational dynamic which charges the unconscious and conscious mind with desire. Hence I accept John Lilly's definition of an ideal as a metaprogram in our bio-computer (Lilly, 1974, p. 39), a metaprogram whose typical strategy is to activate, through desire, great hidden networks of latent assumptions that rest implanted in the unconscious mind (Minsky) and as such reveal the *noumen* within phenomenon.

In that respect, this dissertation again follows the example of Heinrich Wölfflin who was infused with the holistic desire for discovering hidden principles at work in the history of form. Wölfflin maintained that the purpose of the history of aesthetic forms is to understand the particular modes of envisioning, historically available to different cultures in different times. (Wölfflin, 1915) In his 1899 *Classic Art: An Introduction to the Italian Renaissance* Wölfflin was intent upon detecting the theoretical laws of stylistic change that behest the development of form as it metamorphoses from one style to another. (Wölfflin, 1899) Using the minor arts (particularly those rooted in *ornamental expression*) Wölfflin helped to weaken the previous assumptions of hierarchy and value which were established in the history of art. (Kultermann) Hence Wölfflin shows that since all art participates equally in the laws of historical determinism there are no lesser artists, no lesser arts, no lesser civilisations; only *cultural holisms*, i.e., general doctrines which hold that the unity of a cultural belief's content is determined by its place in the web of beliefs which comprises an aggregate theory or group of aggregate theories. (Eliasmith) This notion, of course, contradicts the basic tenants of Post-Structuralism as initiated by Jacques Derrida who, starting with his 1967 *Writing and Difference*, developed the idea of a constitutive fracture consisting of a refusal of the supposed unity of meaning. (Derrida, 1978a) By contrast, Daniel Dennett in his book *Consciousness Explained* has argued that what we are is in fact a unified fluid organisation of conflicting activities between processes in the brain and body. (Dennett, 1991) I have adopted the Dennett/Wölfflinian intellectual position of cultural holism when beginning my research as it provided

me with a wide open arena from which to search for immersive precedents in relationship to the interplay of the three elementary constructional components which make art up: configuration, content, and context. (Arnheim, 1971) But a precise definition of the term *holism* I expect will help further clarify this position.

The term *holism* was coined by Jan Christiaan Smuts (1870-1950) in 1906 although the general notion can be traced to Eastern philosophy many centuries earlier in the ancient *non-dualistic* teachings of Buddha and the theistic, pantheistic, and other ancient forms of *non-binary thought*. (Yamamoto) The basic premise on which the epistemology of *gestalt therapy* rests is that of *non-dualistic holism*. (Koffka)

Gestalt is the German word meaning *configuration*. It is any whole pattern with characteristics different from its parts. The (in our terms immersive) value in the gestalt approach, according to Perls, Hefferline and Goodman "... lies in the insight that the whole determines the parts, which contrasts with the previous assumption that the whole is merely the total sum of its elements". (Perls, Hefferline & Goodman, p. 19) This basic holistic premise was not only adopted by *gestalt psychology*, which is the study of human behaviour and experience as a whole phenomenon, but also by *gestalt therapy* and most of the humanistic and existential psychologies working in the field of perception. (Haber & Hershenson) Consciousness, for example, cannot be studied analytically because the analysis would break it into parts which would cease to bear any resemblance to it. Gestalt psychology showed that the human does not perceive things as unrelated isolates but organises them in the perceptual process into meaningful wholes. (Perls)

However Jan Christiaan Smuts formulated a number of other immersive concepts, the most important of which for the development of an immersive theory is the *unity of the individual*. Smuts wrote in 1895 that "every individual form of life is a unity (...) it is this ultimate and internal unity that shapes the innumerable products of life into an orderly and harmonious whole". (Hancock & Van Der Poel, p. 61) This understanding of humanity regards physical, emotional, and mental events as expressions of a unified individual cognitive being. (Newell) We cannot attain an adequate concept of self by merely summing up the absolute individual component parts of the individual self. *The whole is greater than the sum of its parts*.

More will be said of such a holistic epistemology in relationship to the *gesamtkunstwerk's* aptitudinal powers of evocation in BXIII, especially as it concerns the phantasmagoric Dream King; King Ludwig II of Bavaria (1845-1886) and Richard Wagner (1813-1883) (who coined the term); but a brief and precise definition of Wagner's term *gesamtkunstwerk* is in order here as it is a central concept.

The concept of the *gesamtkunstwerk* (total-artwork) is a proposition rooted in the neo-Platonic heritage of Romanticism. However for Richard Wagner it took on a narrow and precise meaning as he re-theorised it in his 1849 hypothetical essays "The Artwork of the Future" (*Das Kunstwerk der Zukunft*) and "Art and

Revolution" (Kunst und Revolution). (Stein) "The Artwork of the Future" has two principal themes. The first proclaims the doctrine of an "art of the people" which idealised art in a way which would necessarily engage the masses' (inasmuch as it was a narration of the masses own thoughts, feelings and aspirations) as Wagner had imagined existed during the period of the Greek dramas. This is the *gesamtkunstwerk* ideal in the kind-hearted political sense. In order to attain this level of idealised democratic-communist amiable social blend, the formal characteristics of the *gesamtkunstwerk* were theorised as necessarily being the product of a fusion of the separate arts in pursuit of a "total effect" (Stein, p. 62) which would be achieved through a total synthesis in which all of the individual arts contribute.

In *L'Art Romantique* (The Romantic Art), after quoting at length from Wagner's program notes for a performance of *Lohengrin*, Baudelaire tells us that Wagner provoked him to sense clearly the progressive expansion of his daydream, up to the ultimate point when the ecstatic immensity that is born intimately is dissolved and absorbs into the perceptual world. (Baudelaire, 1868) It is beneficial here to recall that Baudelaire felt while watching *Lohengrin* "a sense of being suspended in an ecstasy compounded of joy and insight". (Heim, 1993, p. 125) This special suspended, engulfing, ecstatic consciousness (Rowan, p. 13) is for Baudelaire what immersive consciousness basically must be: excessive. But this excessive consciousness does not abdicate depth, as it seeks correspondence with what is beyond, above, behind, and below it through various frequencies of intensity and lucidity reminiscent of Baudelaire's ideal synesthesia, which he advocated in his text "Correspondences". Here Baudelaire addressed this excessive *gesamtkunstwerk*-like ideal of feeling and smell and sight all mingling together in an entranced, intricate, astonishment (Baudelaire, 1966) and indeed Baudelaire's poetic attestation to the ecstatic (and yet languorous) weaving of all the senses into one *gesamtkunstwerk*-like excessive singularity is certainly important to the further development of the *gesamtkunstwerk* ideal.

However in the widest possible sense of the excessive *gesamtkunstwerk*, Schelling, the aforementioned central metaphysical philosopher of German Romanticism, saw the universe itself as a perfect work of art and he ends his philosophy of art with the demand for a combination of all the arts. (Marx, W.) Complimentarily, Richard Wagner spoke often of his ambition to plunge himself into philosophy, just as he had done into music. Moreover Wagner had studied Schelling's system of transcendental idealism in his youth and Schelling's thought shows an influence on the idealism endemic to the *gesamtkunstwerkkonzept* (concept of the total-artwork). However Wagner dedicated his 1849 essay "The Art and the Future", which concerned the *gesamtkunstwerkkonzept*, to the philosopher Ludwig Feuerbach (1804-1872), author of *Thoughts on Death and Immortality*, in which Feuerbach describes true immortality as that which is conferred solely on sublime deeds and inspired works of art. Feuerbach, who followed Hegel and subsequently was influenced by the theoreticians of socialism, Karl Marx (1818-1883) and Friedrich Engels (1820-1895), conceived of philosophy as essentially an invitation to Hegelian revolution. Hegel had taught

Feuerbach that history has a rational end following the characteristic dialectic of thesis/antithesis/synthesis. (Hegel, 1949) Wagner encountered and read *Thoughts on Death and Immortality* during a spell in Zurich, as the book had been banned in Germany.

Friedrich Schiller himself theorised and experimented with the *gesamtkunstwerk* ideal in his *Braut von Messina* though he was never able to achieve it, in that he was unable to supply the music (Schiller was characteristically a dramatist and poet, known for his 1781 drama of political revolt *Die Räuber*). The majority of Schiller's aesthetic essays, however, were written between 1793 and 1795 and were steeped in the language of Immanuel Kant's critical writings, especially his *Critique of Aesthetic Judgement*. Schiller's influential 1795 essay *On the Aesthetic Education of Man* was instrumental in the development of romantic theories of art, despite the fact that in it Schiller's arguments oscillate between both diachronic and synchronic planes of thought.

In *On the Aesthetic Education of Man* Schiller undertook to scrutinise the connection between the beautiful and art. In it he concludes that art, over time, bequests improvement of the human race and sets the individual free from the constraints of either unmodified nature or the strictly solitary mind. Also within, he maintains that the ultimate endowment of art is education, as art, by its rapport with beauty, exalts the human race through *imagining aesthetic ideals*. Jointly, with Johann Joachim Winckelmann's *Thoughts on the Imitation of Greek Works in Painting and Sculpture*, Ephraim Lessing's (1729-1781) *Laocoon*, and Kant's *Critique of Aesthetic Judgement: On the Aesthetic Education of Man*, Schiller frames the essence of German aesthetic criticism in the mid and late-18th century.

Nevertheless, even though Goethe and Schiller maintained idealistic concepts concerning the *gesamtkunstwerk*, it was Richard Wagner who channelled the two dominant streams of experimentation, the musical (practical) on the one hand, and the literary (theoretical) on the other, into an holistic oneness. Wagner was able to achieve this fusion in a fuller way than his predecessors were able to do because he was a composer of music, a poet and a theorist with an (albeit derivative) body of theory on synthesis (which he followed with a succession of theoretical counter-positions). Following the two initial Wagnerian theoretical essays was another more detailed 1851 essay "Opera and Drama", in which the substantive plan for Wagner's subsequent artistic presentations emerges by subordinating the individual arts into a "total drama". (Stein, p. 6)

Truly, Wagner's "Opera and Drama" is a remarkable admixture of romantic ideals in and of itself, where the aesthetic rationalism of Gotthold Ephraim Lessing, and the materialistic sensationalism of Ludwig Feuerbach blend in the concept of the *gesamtkunstwerk*. The uniting does not end there however. Later Wagner attempts to superimpose upon this hypothetical structure Arthur Schopenhauer's metaphysics of music. And still later

Wagner abandons his original ideas on the limitations of the various arts (and his Feuerbachian materialistic sensationalism) to swing over entirely to Schopenhauer's metaphysical view of art and art synthesis.

In *The World as Will and Idea* Schopenhauer accepts the Kantian ultimate reality behind the world of phenomena and identifies it as human metaphysical will. Furthermore, Schopenhauer holds that music alone is independent of the world as representation (since it does not derive its material from phenomena) and is therefore an expression, not of ideas, but of the metaphysical will itself. (Stein, p. 114) With his acceptance of Schopenhauer's philosophy Wagner assumed a philosophic position which contradicted the very essence of "Opera and Drama" as Schopenhauer ruled out the prospect of artistic synthesis. It was Wagner's quandary in the ensuing years to form a compromise amid Schopenhauer's theory of music as an inevitably lone art and his preceding compulsion to achieve an ideal union of all of the arts. (Stein) Friedrich Nietzsche (1844-1900) writes brilliantly of Wagner's fundamental shift in aesthetic belief in his book *Genealogy of Morals*. (Nietzsche, 1969)

Since Wagner, however, the *gesamtkunstwerk* concept has been expanded and given different colours of meaning as the idea took on a broader, and less formally synthetic sense of unity. Indeed the post-Wagnerian concept of the total-artwork has taken on two meanings which need be differentiated, as I wish to stress one sense (the less Wagnerian sense) of this concept and not the exact, precise sense which Wagner intended. Rather, I am interested in using the more generalised sense of the concept which the notion attained as it circulated and mutated throughout Europe and the Americas. To further complicate things, Wagner's theoretical conception of the *gesamtkunstwerk* is double, as one sees when reading "The Artwork of the Future" in tandem with "Art and Revolution" in which Wagner, under the influence of Mikhail Bakounine's (1814-1876) revolutionary writing, connected aesthetic-spiritual optimism to anarchist force as a way to combat the encroachment of efficiency and productivity endemic to the instrumental logic of the Industrial Revolution. (Taylor, p. 102)

The first sense of the word, the precise sense which Wagner prognosticated for us, is the idea of an artwork made up of a *synthesis of all the arts*: a fused combination of music, poetry, dance, architecture, sculpture, and painting into a *multimedia-spectacle*. Here all of the individual art forms would contribute to the whole spectacle under the direction of a single creative mind. That is the first sense of the term Wagner envisioned. The second is that this synthesis was to be achieved through what he called the genius of community, through the free association of artists lead by a director-writer-composer-performer. Thus Wagner meant two senses of the concept: a totality through synthesis of the art forms (1.) and a revolutionary total communal synthesis of artists (2.). Wagner perceived the Greek Dionysian ritual as a fruitfully rich model for the art of the future because, as he explained in "Art and Revolution", it involved the full community in a fusion of the arts, all embodying one singular ideological dramatic purpose. He perceived this Greek unity as the ideal, or

to put it succinctly, *unity is the ideal*. The goal and fulfilling telos of art is to embody this singularity of unified thought and (implied) unified identity, even though the binary opposition between the recognition of Dionysian and Apollonian consciousness would seem to *a priori* conflict with such an imagined unity if not resolved in synthesis. Regardless, unity was the ideal state of consciousness which Wagner's gesamtkunstwerk is meant to propose. As Wagner saw it, Greek unity had been lost in human consciousness and the arts had been splintered apart and removed from their collective community function which further participated in the break-up of a joint consciousness. (Taylor, p. 108)

This conception came to Wagner while in political exile in Paris (1839-1842) as he was sitting in the Café Littéraire where he was, as he wrote, "dreamily surveying the cheap wallpaper covered in scenes from classical mythology" when suddenly a picture he had seen as a boy flashed before his mind. The picture was a water-colour by Bonaventura Genelli (1798-1868) entitled *Dionysos Among the Muses of Apollo*. As Wagner wrote, "There and then I conceived the idea of my artwork of the future". (Westernhagen, p. 144) That said, Martin von Amerongen in his book *Wagner: A Case History* suggests that it was the outrageous and extremely popular musical productions of Jacques Offenbach (1819-1880) (such as *Orphée aux Enfers* (1858) and *la Belle Héliène* (1864)) which were the "real protagonist of the gesamtkunstwerk" (Amerongen, p. 66) even though Offenbach's productivity follows Wagner's period of exile in Paris and Offenbach left us no penned theoretical doctrine.

Regardless, what Wagner had loved so much about the pictures of Bonaventura Genelli (for example his *Bacchus Among the Muses* which he saw at the home of Genelli's patron Count Schack in Munich) was the fact that they suggested to him a new conception of Greek classical culture that went beyond the classical ideal of *noble simplicity* which was the reigning conception of the classical ideal as presented throughout Germanic culture by the archaeologist Johann Joachim Winckelmann in his widely read book *The History of Ancient Art*. In it, Winckelmann described the highest beauty as that which is in simple harmony with God (which reminds me that Kazimir Malevich (1878-1935) alleged that he saw the countenance of God in his simple abstract black square paintings). (Gablik, 1984, p. 21)

Winckelmann's codification of classical ideals as those being primarily uncomplicated and Apollonian in their logic had become reified into a legislative code. (Winckelmann, 1968) In Genelli's paintings Greek classical culture was presented, rather, as a dramatic conflict between Dionysian and Apollonian ideals. It is significant that the *gesamtkunstwerk*konzept *der zukunft* (the concept of the total-artwork of the future) was established under this sign. Pertinent to these concerns is Friedrich Nietzsche and his acute criticism of the static culture of the bourgeoisie via similar terms, particularly as it relates to the gesamtkunstwerkkonzept in *Die Geburt der Tragödie* (The Birth of Tragedy), Nietzsche's account of classical Greek drama and its merits. In *The Birth of Tragedy* Nietzsche procures the concepts of the Apollonian and the Dionysian principles out of Greek

tragedy. The Apollonian principle; reasoned, restrained, self-controlled and organising, is subsumed, according to Nietzsche, within the Dionysian principle, which is primordial, passionate, chaotic, frenzied, chthonic and creative. This dialectical aesthetic tension allows the imaginative power of Dionysius to operate, in that the products of this operation are kept intelligible by Apollonian constraint. Hence Nietzsche examined the dialectic between an Apollonian calmness in relation to an antecedent Dionysian non-restraining tragedy which has its origins in the chants of the Greek chorus. By invoking the power of the Greek drama, Nietzsche implied a pejorative judgement on subsequent dramatic forms of realism and inert spectatorship. (Nietzsche, 1967) Generally speaking, this aspect of Nietzsche's thought participated then in the widespread ideal embedded in Romanticism of a popular recovery of the mythic precondition necessary for a unified/total cultural consciousness based on, in most cases, the sublime excess of the infinite. (Nicolson, M.)

It is salient to these concerns quickly to recall the formation of opera as an art form as it, as a convention, expresses this ideal of Greek unity and its synthesising attributes. The origination of opera occurred at the end of the 16th century in baroque Italy. The word *opera* derives from the Latin word *opus* which means *work*, however the word *ritual* may be a more accurate description. The Earl of Harewood in his *Kobbe's Complete Opera Book* points out that the antecedents of opera are to be found in the buffalo dance of the western American Indians, in the *Ramayanda* of India, and most notably, in the inclusion of singing as an expressive element in ancient Greek ritual; all of which express drama through sung music, gesture, and guise. Medieval Mystery Plays likewise contained some of these elements as did the semi-dramatic Madrigal Comedies, the Pastorals, the Masques, and the Interedios. (Jacobs & Sadie) All of the above mentioned synthetic rituals present in some proportion or another a mixture of song with instrumental music, oration, and performance in various proportions. I hasten to add here that the Catholic Mass, which blends music, singing, performance and visual intensity (among other things), should also be included in this account of precedents. This precedent seems to have been overlooked in the sources I researched which I find peculiar particularly in that Italian culture was heavily penetrated by Catholic ritual in the 16th century.

Regardless, it was in Florence where a group of intellectuals referred to as the *Camerata* brought opera to its initial flowering as lavish entertainment. What is germane is that the Camerata group was *dedicated to the renaissance ideal of recapturing the spirit of Greek drama*. In this respect Wagner's attempt to recall Greek unification consciousness through opera is doubly rich in that by doing so he hails back to the origin of opera twice as the early operas generally took classical Greek or Roman myths as their basis (partly due to the fact that the public was *a priori* familiar with these tales and presumably with their many allegorical layers of meaning) but even more significantly because these tales too hearkened back to the ideals of Greek holistic kinship with which their creators wished to be identified. (Jacobs & Sadie)

The first recognised opera was *Dafne*, completed in 1598, which was produced in Florence. But the operatic style quickly spread throughout much of Italy, chiefly through the works of Claudio Monteverdi (1567-1643), who is recognised as opera's originator.

It is consequential to note the failure of the strict Wagnerian concept of the *gesamtkunstwerk*; an ideal which never reached fulfilment even within Wagnerian aesthetics. If one conceives of the *gesamtkunstwerk* as a fusion between all of the arts, as Wagner did when he first published it, its weakness as an aesthetic ideal becomes immediately obvious. By fusing a successful work of art, say T. S. Eliot's (1888-1965) poem *The Wasteland*, with music and drama and dance, is it necessarily a stronger and better work of art? Is even contemporary music always improved by the MTV video which accompanies it? The obvious answer is no, not necessarily so. Furthermore, is anything less like a Dionysian celebration in conflict with Apollonian aesthetics than a Wagnerian opera? In my estimation, a punk rock performance by the Ramones (Marcus) came far closer to this proposal than Wagner's own productivity.

Wagner himself, when writing later in life on Ludwig van Beethoven (1770-1827), leaves behind his own strict *gesamtkunstwerk* ideal and places music above the role of poetry, drama, and the visual arts. In his text "Beethoven", Wagner celebrates music's "unique powers in realising supreme accomplishments" in the arts and reveals, in terminology close to Arthur Schopenhauer's, his belief in music's power to reveal the perfect embodiment of the objectification of the will. (Wagner, 1897b) Thus music resumed its role as *daemonium* through what he perceived as its sublime intensity over and above the other arts and any hypothesised polymedia fusion between them.

The subsequent non-strictly-Wagnerian modern meaning of the *gesamtkunstwerk* concept, however, indicates an *experience of inexorable entirety* and this definition is the appropriate meaning to this study of immersion, as it was this sublime sense which emerged in romantic philosophy and subsequently in neo-gothic and then neo-rococo architecture and art theory, which spread through the Arts and Craft Movement and flowered as the *raison d'être* of the Art Nouveau movement. Stripped down but smoothly persisting it became the central motivating ideal of orthodox Modernism's unified reductive model. (Greenberg, 1961) This objective was ruptured only briefly during the post-modernist period as now it is thoroughly resumed with immersive VR technology, as shown. Indeed it is the insignia of the World Wide Web (WWW): the *net*.

This sense of the *gesamtkunstwerk as inexorable entirety* is the objective and means of total-immersion, but it also recedes backwards, as Section B will demonstrate, into Prehistory where the ideal of total-immersion begins as *inexorable entirety* for me, well before the supposed Greek unity with which Wagner began his theory. As Wagner himself stated in his essay "Religion and Art", "The Science of Aesthetics has at all times laid down Unity as a chief requirement from the artwork." (Westernhagen, p. 182) Though his statement is

problematic if not patently false, as the fragmentation (albeit unified in collage/montage) intrinsic in various forms of unorthodox Modernism (and explicitly in Post-Modernism) has shown us, I think it true to say that this conception of art as a unified exemplification of overriding mind-sets/world-views holds much in way of inquisitional material when seeking to identify and elucidate ideals, as in this case, immersive ideals as suggested by immersive technology.

This inexorable entirety notion of the *gesamtkunstwerk* is the sense of the concept which began to be applied retrospectively to art projects in which art strives to achieve a *unified effect*. This is found first primarily in interior-architectural theory; in neo-gothic architectural theories (referring to gothic cathedrals and palaces) and neo-rococo architectural theories (referring to extravagant rococo interiors). (Ball, V.)



18th century rococo interior at the Palis Royal, Madrid

These theories are relevant when discussing interpretations of the *gesamtkunstwerk* in terms of immersive virtual worlds. Here the stress lays less with the fusion of normally discrete art forms and more on the *totalising, harmonising and engulfing immersive effect* of the art experience within any given art form. I will be using this extended, comprehensive sense of the idea which the notion attained in, for example, Adrien Henri's important book *Total Art*, a book which concerns Environmental and Kinetic Art, Performance Art, and some Happenings of the 1960s and early-1970s. Henri adapts the term *gesamtkunstwerk* in historically contextualising a stream of art in the 1960s and early-1970s as work which "sets out to dominate, even overwhelm; flooding the spectator/hearer with sensory impressions of different kinds. It is not meant as information but as experience." (Henri, p. 10) With this sense of a "seamless union (...) that would sweep the viewer to another world..." (Heim, 1993, p. 125) we can immediately see here how immersive Virtual Reality

with its potentially overwhelmingly 360° FOV qualifies as an inexorable entirety gesamtkunstwerk. So, rather than further hypothesising polymedia fusion, with all of the weaknesses and gaudiness that that idea may entail, I have adapted this inexorable entirety concept of the gesamtkunstwerk and further defined it as an art which cedes a *unified total experience expressing a dominant ideal*, regardless of the fact that Wagner did not desire this type of encounter for his audience, or if he once did he repudiated it later in life. In fact Wagner dropped the term gesamtkunstwerk-konzept from his vocabulary altogether late in life. Evidently he lost interest in a unified art experience which overwhelms the audience, as he wrote the virtuoso pianist and composer Franz Liszt (1811-1886) on August 16, 1853 that, there is no reason why there should be "this wretched 'special' and 'total art'" and he bade Liszt to make "no more mention of that wretched 'total art'!!!!". (Westernhagen, p. 147) But additional mention of the total art ideal was made by others; indeed much.

So, as explained, I will adapt the concept of gesamtkunstwerk as a *unified total experience expressing a dominant ideal in search of an inexorable entirety* as the pertinent one. This understanding of the inexorable entirety gesamtkunstwerk, as we shall see more clearly ahead, can be traced retrospectively to ancient times; within prehistoric caves, the Greek nymphaea, and Roman grottoes. It is this inexorable entirety sense of the gesamtkunstwerk, in conjunction with Charles Baudelaire's theory of correspondences (Baudelaire, 1966), which was avidly taken up by the Symbolist and Post-Impressionist circles and which coiled its way into the orthodox modernist *ideal of unity through reduction* in an attempt to unite the various art forms so as to arrive at an all-embracing universal language of art. (Barzun)

Susan Sontag has identified this all-embracing tendency, which she characterises as a "breaking down of the distinction between artistic genres", as one of the two major radical positions of early (mid-1960s) post-modern art (the other trend stridently maintaining those distinctions). (Sontag, 1966, pp. 24-37) This all-embracing gesamtkunstwerk ideal, which Sontag goes on to identify as a desire for a "vast behavioural magma", though under serious attack within authoritative Post-Modernism, as previously mentioned, penetrates certain aspects of Post-Modernism itself. For example this gesamtkunstwerk ideal of "breaking down of distinction" is detectable in some aspects of Fluxus and Actionism and clearly in the Happening movement and developments in the Expanded Arts (Popper, F., 1975) which flourished throughout the 1960s and 1970s and in today's Art Installation Movement and some VE°art. In fact the basis of the post-modern sensibility arises from an acceptance that reality is understood as a *congruous region* where various complex levels of meaning interrelate. (Crowther, p. 163)

It had been suggested that the expanded cinema was the successor of Wagner's ideal of the gesamtkunstwerk (Youngblood), with its tendency to provide an apparent seamless fusion between the visual and the aural and by providing the spectator with a cathartic emotional involvement (Wyss & Bazin), but with this I do not agree. VR is the real successor, but not because it fuses sights and sounds together. It is so because its total-

immersion cuts us off from the world and plunges us into a homogeneous (even if manifold) mono-world without external distraction. It is precisely this sense of radical *aesthetic transcendence through an intimate totality* which immersive experience offers, as it provides a complete alternative reality to the immersant for exploration and contemplation. It is due to this sense of immersive art's production of a consummate whole that the term *holothesiatic gesamtkunstwerk* holds relevancy to the study of the aesthetics of immersion today. *Holosthesia*, a word coined by Dr. William Martens, describes any medium which produces the all-embracing perception of an event through several (or all) sensory modalities in a self-consistent manner. (Martens) The term *holosthesia* has its roots in the Greek word *holos* (whole) and *aisthesia* (to feel or perceive). According to Mark Pesce, immersive Virtual Reality falls into this category of holosthesia in that "holosthesia is the necessary component of (...) synthetic perception". (Pesce, 1994)

AVII: Questions of Absolutes, Post-Modern Evaluations, and Omnijective Understandings

...in our awareness the spatial is entangled with the non-spatial...

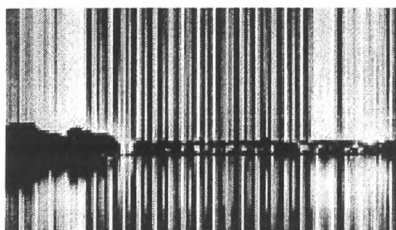
-C. J. S. Clarke, *The Nonlocality of Mind*

I understand these two certainties, my appetite for the absolute and for unity, and the impossibility of reducing this world to a rational and reasonable principle.

-Albert Camus, *The Myth of Sisyphus*

Relevant to our understanding of total-immersion are the concepts of *absolutes* and *wholes*; concepts which will necessarily appear throughout this discussion of idealised immersive worlds and their internally self-defining postulates. The dialogue between parts and wholes is one of the prerequisites for understanding the fuller immersive implications which VR suggests, as its immersive perspective overrides many previously apparent mutually exclusive categories. However I do not wish to be guilty of manufacturing or reproducing false universals and thus I will proceed researching and discussing this arena without wishing to pronounce already in advance on whether or not there is such a thing as an *absolute* or *whole*. But it must be remembered that total-immersions are experiences of emerging consciousness where viewer and view coalesce and as such they reveal themselves through their vivacity and their effaced impulses towards the desire, at least, for the *conceptual closure of wholeness*.

But there is a caveat. I am writing these words at a time when privileged transcendent values of closure (particularly those supposedly ordained by cosmic forces) are increasingly experienced as inaccessible and even insanely dangerous. A good example of the latter is the UFO cult Heaven's Gate's idiotic tragedy where members committed suicide *ensemble* in belief that by doing so they would rise up to meet incoming space aliens travelling behind the passing Hale-Bopp comet. At the Heaven's Gate web-site (created by their own Higher Source group) there is a reference to the Hale-Bopp comet as bringing "closure". One also is reminded of certain monomaniacal aspects of Nazi art ideology as recapitulated by Albert Speer (1905-1981), the Nazi theorist, architect and spectacle designer (Speer, 1969) and the steadfast philosophical outpourings against them of the recently deceased philosopher Sir Isaiah Berlin (1909-1997).



Albert Speer, *Ice Cathedral*

Even while Berlin recognised the desire for monistic closure as an abiding human trait, he attacked what he saw as the predominant 20th century Western version of monism, which for him consisted of irrational propositions which put forth a single, final solution to human problems furnished by an ultimate and overarching truth that merits the sacrifice of human life to such a grand abstract truth. (Berlin) Regardless of the types of abusive possibilities which Berlin points out to us, *Immersive Ideals / Critical Distances* concedes to the rhizomatic/connectivist (hence ultimately hyper-holistic) notion that parts of a cognitive system have significance primarily by virtue of their interrelations and accessions with all other parts. This then is a 360° rhizomatic hyper-holism connected from all sides, as it were, since it eschews *a priori* transcendent closure from above. As such it seeks out hyper-holistic understandings via the n-dimensional perspective of connected inclusion. It is my opinion that the greater part of the history of art of the 20th century has striven to depict and activate just such an inclusive hyper-perspective. Hence, in its hyper-holistic and rhizomatic open-endedness, *Immersive Ideals / Critical Distances* will seek to avoid interpretative agnosia through just such a mentally hyper-contiguous magnanimity.

The abstract (axiomatic) concept of an *absolute* generally evokes anything established as being free of subordination; anything unfettered by the reliance upon factors external to itself. (Rosenthal) For example, *absolute scale* means the actual size of an object without reference to the size it appears to be in a given context. In the philosophy of metaphysical idealism the absolute is the totality of what exists. (Eliasmith) In aesthetics it implies that which is the opposite of *relativism*. Hence it insinuates that there are eternal and immutable standards for the evaluation of works of art. Most post-modern thought rejected *absolutism* (Harvey) which, to my mind, is one more privileged absolutism (though unequivocally a more legitimate one) to add among the rest. But just what is meant by that seemingly contradictory phrase *Post-Modernism*?

The terminology *Post-Modernism* was first used in reference to architecture as early as 1947, spurring a fertile discussion among architectural theorists. (Jencks, 1996) Literary critics began to employ the term in the 1960s to distinguish post-World War II experimental fiction from the writers of High Modernism. Post-modern writers are considered to be Samuel Beckett (1906-1989), Jean Genet (1910-1986), Jorge Luis Borges (1899-1986), William S. Burroughs and most all of the writers following the Second World War. The publication of Jean-François Lyotard's tract *The Post-Modern Condition* further defined the post-modern aesthetic, as in it he emphasised the anti-holistic aspects of French post-structuralist theory and its opposition to eternal, metaphysical truths and to grand narratives or theories that provide totalising explanations. (Lyotard, 1984a) Instead, Lyotard proposed that we lived in a post-modern era in which decisions are made on the basis of local conditions and are applicable only in that limited context. (Foster, 1985) Obviously, in my view, this statement is now passé, given the global inter-connectivity of the mid-1990s.

Generally speaking, in Post-Modernism the modernist formal examination of art in sequestration yielded to an investigation into the social determinants of the artwork and to the ideological assertion, whether explicit or implicit, of the work. As a result post-modern art abandoned the distinctions between high and low art. (Higgins, D.) Post-modern art thus aspired to employ the affective capability of popular images, much as standard corporate culture does. (Crowther) But more importantly, Post-Modernism opened the door to a plethora of once marginalised heterogeneous genres.

Following the release of the Lyotard text there was a pertinent rebuttal to Lyotard's theory of the post-modern by Jürgen Habermas and Fredric Jameson, among others. Habermas insisted that a complete immersion in the local gives us no way to judge it and is thus doomed to accommodation with the given. (Habermas, 1989) Jameson lamented a lack of distance between post-modern theory and the schizo-capitalist society (Deleuze, and Guattari, 1987) that generated it and he argued that we needed another theory capable of representing the complex realities of the emerging global economic order that, as he saw it, exploits the vast majority. (Jameson, 1988) During the 1980s, Post-Modernism in the arts tended to emphasise issues of style and history (Crowther) even while the common use of the term *Post-Modernism* induced a crisis in the whole notion of historical and artistic periods, as every distinguishing feature of Post-Modernism can be located in an era prior to its own. What was particular to Post-Modernism then was not the inclusion of something new but rather the newly focused concentration on features of the past that were most often previously overlooked. (Davis, 1977) In that small sense this dissertation partakes in the tradition of Post-Modernism, as it makes up part of an elaborate rereading of history which is still taking place in our healthy climate of critically questioning previously established traditions. (Kroker & Cook) As I will demonstrate, a good deal of the basis for the questioning of the Western tradition can be found in the Western tradition itself, if we look with new eyes and ask new debatable questions about it and join this with an interest in non-Western expressions which may offer divergent perspectives on the West's previously totalising self-image of itself.

By attempting to do so, *Immersive Ideals / Critical Distances* participates also in the tradition of hermeneutic interpretation, as formerly mentioned. Because *hermeneutics* initially attempted interpretations of the *Bible* and accepted that all aspects of a Biblical stanza had to be meaningful because they were (supposedly) divinely inspired, hermeneutics carries a cognate connotation that meaning is to be derived from every conceivable feature of a text or artwork that can be construed as a bestowal to some sort of a *co-ordinated hagiographical whole*. (Madison) *Hagiography* is a doctrine that maintains that all objects, events and experiences are parts of larger wholes. Though hagiography can be an insidious practice, it is, when used circumspectly, useful in formulating hyper-configurations of immersive style in that immersion runs through several distant periods at many different levels of degree in this study. Influential to this approach (in this respect) was Peter Bürger's book *Theory of the Avant-Garde* in which he put forth the proposition that a hermeneutic interpretation must apply in some way to a *totality of meaning*. (Bürger) Hence it is this sense of

the variant attributes of aesthetic immersion (with all the gradient distinctive characteristics with which a phenomenological investigation of immersive states necessarily entails) which will be utilised to formulate a symphonic hagiographic mélange of immersive ideals.

By using hagiographic intentions carefully, specific historical periods involving immersion can be characterised by clusters of immersive perceptions and feelings consistent with the definition of consciousness as the totality of experience at any given instant. (Chalmers, 1996) The expression of these perceptions and feelings though, demands a dependable uniformity consistent with a formal hagiographic approach. There are multiple hermeneutic approaches with which to perform hagiographic wholes however. (Kearney, 1995) The key hermeneutic approach, which I am adopting for the purposes of this largely hagiographic discourse, stem from Paul Ricoeur's book *The Conflict of Interpretations* in which he distinguishes between linguistics (which he conceived of as a mostly sealed system of intra-significant signs) and the extralinguistic properties of hermeneutics. (Ihde, 1971) Prominent to the adaptation of hermeneutical imagination (relevant to immersive states) is what Ricoeur explains as key to his hermeneutical principles: an "opening up of a world". (Ricoeur, 1981, p. 181) Hence immersive conclusions must open up new perspectives, for, as Ricoeur further writes, "are we not ready to recognise in the power of our imagination (...) the capacity for letting new worlds shape an understanding of ourselves". (Ricoeur, 1981, p. 181) If so, then immersion within virtual worlds, forthwith perforated and connected by passage links (Loeffler), offers us today, I submit, just such an occasion for re-understanding ourselves. As we become immersed in the global hyper-media landscape which facilitates the real life-world of conflict or accord, questions of rapport are of the utmost importance. Immersive reflection then in Ricoeur's terms "opens up a world" of reflection which behoves us anew to reflect on our sense of closure and affinity, on our sense of singularity and totality, and on our particular motives in accepting to place ourselves (or not) within national, ethnic, racial, and sexual political power structures in the real life-world of instrumentality. (Boskovic) Ricoeur also implies that the power of immersive imagination would "not be conveyed by images, but by emergent meanings in our language". (Ricoeur, 1981, p. 181) Thus the reader has discovered within this discourse a few new words, based on hybrid concepts generally, and supplementary rejections of previously inherited words and notions, as would be expected.

I, necessarily given my background, started writing with the eye of a painter on developments in new technology in conjunction with the evolution of art as a theoretical discipline. (Kosuth) In doing so I found myself confronted with a host of contradictory impulses. Of course this distinction between the theoretical and practical aspects of art cannot be taken as absolute, since the artistic process necessarily involves experiments between the two. Besides, technology and art alike develop out of theoretical premises. (Weibel) Hence the theoretical premises behind both technological practice and hypothetical theory fascinated me with their common bonds and this helped ease the perception of contradiction. I was further convinced of the

appropriateness of this realisation after rereading Peter Bürger's aforementioned book *Theory of the Avant-Garde*. Previously, the hermeneutic exposition had to resolve all traces of contradiction, but Bürger called for a reconsidered approach replacing the obligatory conformity of parts with a stratification of elements in which different layers might challenge one another and yet still endow meaning to the whole through their very contradictoriness. (Bürger) So I began with the painterly artistic sense of immersion (where the human imagination may pass from suggested two-dimensional space into an apparent boundless space) and from this non-literal position began to formulate an artistic consideration of some of the wider implications and ramifications of this passage, now further literalised in the enveloping space of VR.

I do not know whether it must be said today that such a reflexively profuse task entails faith in art, but I continue to think that the self-defined task of artist requires continual work on our socially imposed limits, that is, a stalwart but buoyant exertion giving pattern to our impatience for expansion and liberty. Yet many artistic concerns can be found in other areas of endeavour. Scientists and some philosophers still use criteria such as beauty and symmetry to help them decide which theories they prefer, for example. As an exemplar, I cite David Chalmers' use of such aesthetic values when he outlines what is required to formulate a fundamental theory of consciousness. According to Chalmers "nonempirical restraints" on theory such as "simplicity" and "homogeneity" are appropriate (Chalmers, 1995, p. 211), even though previously he concedes that thinking and perception are more like a "whirl" (Chalmers, 1995, p. 201); a Dionysian jittery quality far from the placid Apollonian aesthetic values of simple unity. Moreover, in evaluating a utilitarian instrument or software, the contemporary interpretation of technical refinement is often that of an elusive elegance perceived from its Apollonian simplicity and power. (Gelernter, 1997) But in art and aesthetics we, generally speaking, identify something as beautiful when it has the "propensity to call forth a response of delight" (Savile, 1988, p. 14) and in many cases this response involves deep levels of complexity and even Dionysian chaos. In making immersive qualitative judgements I too will refer to this convoluted "response of delight" property, as the grounds to do so lay in a felt excitement and delectation.

As Herbert Marcuse (1898-1979) has explained, art functions by the felt transmission of ideals which act in exciting other people's feelings, ideals and creativity. (Marcuse, 1978) That is why we must look back and forward simultaneously so as to inquire into the effects of science and high-technology on the internal sensualities of artists (and by implication society) as it is clear that the framework for the shift from industrial to service to information economies has been fuelled by the computer in order to know to what extent science and computer high-technology frees and enhances idealistic imagination and increases sensuality. Pertinent to this question is what Frank Popper says in his seminal book *Art-Action and Participation* when he contends that we must make a basic distinction between science and technology. According to Popper, science, in its comprehensive sense, is the exact and rational knowledge of specific phenomena. The impact of physical science on art can thus be studied from a purely theoretical angle. Technology, on the other hand, is generally

considered to be the application of science on the industrial level and originally on the pre-industrial level of arts and crafts. (Popper, F., 1975, p. 204) However such technological processes such as amplification and transmission may provide technical assistance to art's general anti-utilitarian spirit. In this way technological éclat becomes a process within the overall transmutation of cultural value as the artist adopts technology while generally leaving out its proscribed utilitarian function. Thus technology's influence on art is chiefly practical, even while, as the examples in Section B of this thesis demonstrate, technological procedures can be adopted and transformed into introspective artistic techniques.

My interest in technology's influence on art developed through just such a fascination in the application of "objective" technological developments in correspondence with a "subjective" artistic anti-formalism as applied to my own art. Post-structuralist methodology encouraged just such an interdisciplinary crossing where technology's, art's, and philosophy's previously insular roles (roles which previously tried to examine their areas as unique, sealed off disciplines) are blended. (Poster, 1990) But perhaps this question needs further articulation, as it will remain a constant subtext embedded within the entire dissertation.

In philosophic terms, *subjectivity* is a term used to denote that the truth of some privileged class of statements depends on the mental state or reactions of the person making the statement. In epistemology, subjectivity is knowledge which is restricted to one's own perceptions. This implies that the qualities experienced by the senses are not something belonging to the physical beings, but are subject to interpretation; an attribution parallel to Spinoza's previously mentioned total-monist position. This view is based on the limitation of the senses as physical organs. (Levine) In metaphysics, subjectivity includes the idea of *solipsism*. In aesthetics, subjectivism is the view that statements about beauty (for example) are not reports of "objective" qualities inherent in things but rather cognitive reports of internal feelings and attitudes.

In terms of virtual immersion, I have come to understand that the concepts *subjective* and *objective* do not function any longer, at least not within the realm of the total-immersive experience. As Stephen Talbott construes, when exploring a VE, is that orb imaginary (subjective) or actual (objective)? In fact it is neither/both. It is "subjective" as its forms and spaces (which are rendered in a programming vernacular which defines the rules objectively) are postulated by personal, interactive, participation/choice; but it also is external and "objective", as one may not redesign the space's options according to one's own autonomous whimsical inclinations. Moreover, if an immersant influences a form by moving it within a VE, that is where another immersant in the space will find it. There is, furthermore, purpose in the entire representational contrivance predetermined by the designer/programmer. (Talbott) But suppose many immersants share a VE where the software affords the assembly some means for reconfiguring the space's programming algorithmic parameters from the inside, at the level of the software, while immersed inside of the VE. What is now fanciful and what is extrinsic? If the accumulated subjectivity determines the actual algorithmic forms, and if

the objective algorithmic forms induce individual indefinite experiences subjectively, it becomes highly speculative to pigeonhole types of experiences as exceedingly fancied or extrinsic as the immersant can no longer detach her or his selfhood and view the events from an "objective" distance.

Thus useful and relevant to VR immersion is the understanding of *omnijectivity*, the metaphysical concept stemming from the discoveries of quantum physics which teaches us that mind (previously considered the subjective realm) and matter (previously considered as the objective realm) are inextricably linked in omnipresence. (Bohm, 1993) The term *omnijectivity* corresponds with Gene Youngblood's term *extra-objective*, which he used to describe the "synaesthetic and psychedelic features" of what he termed *synaesthetic cinema*, an underground cinema tendency of the late-1960s which ostensibly combined subjective, objective, and non-objective features into a syncretistic perception of the simultaneous space-time continuum. (Youngblood, p. 81) This syncretistic perception was chiefly accomplished by the use of superimposition and by "reducing depth-of-field to a total field of non-focused multiplicity" after closing the span between the inside and the outside of the picture plane. (Youngblood, p. 85) Youngblood derived the term *synaesthetic* from Anton Ehrenzweig's idea of *syncretistic vision*, which Ehrenzweig characterised in his book *The Hidden Order of Art* as a *total vision*. (Ehrenzweig, p. 9) More will be said on the origin of the key concept of omnijectivity in AX.

Even though Otto Kernberg pointed out that the splitting of the subject from the object is "the crucial mechanism for the defensive organisation of the ego" at its most basic (pre-oedipal) level (Kernberg, p. 26) the subject/object question pursued in this discussion will not appear in any stable binary positioning of easy subject/object opposites, as I recognise, as Stephen Talbot points out, that the subject/object set functions more along the dialectical lines of the magnet, where the north pole exists only by virtue of the south pole (as is the contrary). Like the supposed subject/object opposites, neither pole exists in isolation. Hence a subject/object debate in terms of immersive perspective (a debate I do not wish to shy away from) is possible only with the radical conflation of this polarity into an omnijectivity which recognises the mutual interpenetration that unites the apparent opposites. Then there is something of the subject in the most impenetrable object, and an objective, world-sustaining presence in the sheerest subject. As with the magnet, where if you nip off the slightest piece of one end of the magnet you will discover that it still possess both a south pole and a north pole, so the forces of subjectivity and objectivity co-exist in omnijectivity. It is as impossible to conceive of an isolated subject or an isolated object as it is to conceive an isolated north or south pole, but it is entirely imaginable to relinquish sight of their conjoint importance. (Talbot)

This said, in what sense is immersive art and, in VR's case, the immersive computational environment/subject amalgamation it employs, especially pertinent to us as omnijective beings? This is the question which has fascinated me as I began to define and then assemble an account of immersive aesthetics

in connection with the history of art and the mind. With aesthetics we are obliged to realise philosophical considerations of art and the question of how we define art is thus brought to the fore. Immersive aesthetics employs necessary omnijjective questions concerning our experience of time, space, and consciousness, and, by inference, how we view our being.

An emerging omnijjective/immersive aesthetic beckons forth and amends the previously mentioned *mind/body problem*, the metaphysical problem of how the mind and body (and I would stress the body's eyes) are related to one another and of how consciousness relates to conjectural substantiality in immersion. This problem concerns the question of how something incorporeal like consciousness can cause something physical like the body to act. Male masturbatory practices stimulated by lifeless, flat, printed (or electronic) images, (and even more abstractly, words) serve as an example of this puzzling question. How can inked or televised images and printed words stimulate physical erections in men?

Among the more important positions in the formation of the general debate is René Descartes' argument that the mind and body are quite disconnected elements that anyhow interact with one another. (Damasio) Richard Rorty asserts that Descartes' feat was conceiving of the human mind as an internal chasm in which both pains and clear and distinct ideas passed in examination before an inner eye. (Rorty) By contrast, Gottfried Wilhelm Leibniz asserted a theory of psycho-physical parallelism based on his theory of *Monadology*, his previously mentioned model of a system which conceived of unity in plurality and plurality in unity. (Calinger) Leibniz's monadological ideas have substantially influenced those of Gilles Deleuze, whose fertile philosophical articulations have played an important role in this dissertation.

Based on the above understanding of aspects of qualified hyper-absolutes and post-modern omnijjective understandings concerning immersion, my formative contention is that immersive aesthetics (based on omnijjective impulses) when contextualised in a wider historical arena can be reasonably adept in assisting us in the intrinsically hermeneutical comprehension of our hagiographic existence. Such an omnijjective/immersive aesthetic would be capable of heightening the relative theoretical worth of art historical scholarship in rapport with the most recent developments of the information revolution in the service of an expansive conversation concerning our joint aesthetic consciousness.

AVIII: Scrutinising the Terms of Total-Immersion

It is difficult to oppose the virtual world because it harnesses all the polarity of the system, the positive and negative poles; it absorbs everything.

-Jean Baudrillard, *Philosophy Discussion with Jean Baudrillard: Interview by Claude Thibaut*

We are, cognitively speaking as well as physically, spatial beings par excellence: our entire conceptual scheme is shot through with spatial notions, these providing the skeleton of our thought in general.

-Colin McGinn, *Consciousness and Space*

A hyper-real sheltered from the imaginary, and from any distinct relation between the real and the imagined, leaves room only for the reoccurrence of models in the simulated generation of difference.

-Jean Baudrillard, *Simulations*

Totality or multiplicity in abstracto is nothing other than 'something or other', and 'something or other', and 'something or other', etc...

-Edmund Husserl, *Habilitationsschrift*

As with art, reductive explanations of consciousness have proved impossible. (Chalmers, 1995, pp. 208-210) Correspondingly the term *immersion* merits a wide aesthetic interpretation as a *saturating abstract experience*. (Wollheim, 1970) In a VE, immersive phenomenon implicates the bipolar spectator's instinctive responses by soaking perception-cognition's threshold in an excess of connected/unified spatial information. I say unified because it must be recalled that digital media (i.e., VR) transforms originating analogue impulses into the homogeneity of digits. (Negroponte) Friedrich Kittler, professor of philosophy at the University of Freiburg/Breisgau, Germany, in his tract "Gramophone, Film, Typewriter" points out that the general digitalisation of information erases the difference between individual media. An analogue-to-digital conversion process transfigures all various physical quantities into homogeneous numbers. (Kittler) And numbers, it must be remembered, are abstractions that have no solid tangible actuality. (Negroponte) The fact that digital media (VR) accumulates abstract numbers into unifying abstractions (based on traces of analogue events) makes digitalia both abstract and unified in essence.

In the non-digital realm we need to distinguish between the quotidian and the artistic sense of the word *immersion* and draw a line between immersion in the common architectural and household sense of the word (those immersive transitions which we are obliged to submit to in terms of city planning and housing) and those, on the other hand, of supple epistemological artistic merit where it is a matter of active rather than passive relationships between perception, imagination and feeling. (Walton) As previously established, art is an individuating way of envisioning the world based on a conceptual metaphysics that is produced in a distinctive style. (Chamber) As my architect acquaintance, Rebecca Kaplan said to me in an email interchange, "architecture could qualify, after VR, as the most immersive of the arts, but first it must qualify as art." And of course at rare times architecture does qualify as art. Indeed entire cities can attain an artistic splendour when designed in a harmoniously unified style. Examples are the Indian cities of Jaipur, which is a

predominantly pinkish coloured city, and Jodpur, which is wholly bluish. Moreover, renaissance Italy provides us with a number of examples of what is referred to as the *Città Ideale* (the Ideal City), cities which display an elegant unifying characteristic. (Pennick, 1979) Also, in France, King Louis XVI's (1754-1793) royal architect Claude-Nicolas Ledoux's (1736-1806) microcosmos project at Arc-et-Senans (whose entrance is designed to resemble that of a cave) deserves special mention. (Miller, N., pp. 97-98) The *Ideal City of Chaux at the Saline Royale* (the Royal Salt Works at Chaux-de-Fonds), where I worked as artist-in-resident for over two years, was conceived in 1774 (though never completed) in idealistic and total terms. So also was the industrious municipality of San Leucio in the late-18th century near Naples, Italy. Such ideal cities, which have been planned and constructed as *single entities*, have a *unity and totality* which could not have been accomplished differently and thus deserve the designation art.



16th century design for the ideal city of Palmanova

For reasons of clarity, experiences of *absorption* must be separated out from experiences and expectations of *total-immersion*. Absorption is a necessary prerequisite of immersive presence. Certainly it is necessary to give ourselves up to an artwork and to forget other matters temporarily in order to receive an immersion of any particular emotional benefit. Also it is true that absorption and intense concentration are cardinal factors in inducing the sense of out-of-bodiness typical of total-immersion. But reading or viewing film, interacting with Multi-User Dungeons or MOOs (in their present state), or Internet Relay Chating (IRCs), however engrossing the activity can become, is by my terms *non (or only very partially) immersive* in that the activity is primarily *frontal*, involving a *centrally directed concentration of sight*. Indeed U. S. Army Research Institute/Catholic University researchers flatly state that total-immersion in a VR world "is not like being immersed in a book or a good movie" and that "it appears to be more like remembering your dreams". (Psotka & Davison, 1996) Loss of self-consciousness when watching standard television programs, video, or a staged performance is equally non (or only slightly at best) immersive.

In my view one of the most important characteristics of immersion is a sense of total enshrouding closure in the visual and audio environmental field. This definition counters that offered by Ken Pimentel and Kevin Teixeira who, in their book *Virtual Reality: Through the New Looking Glass*, state that the feeling of being immersed in a computer-generated world involves the same spontaneous substitution involved in suspending disbelief for an interval of time as "when you get wrapped up in a good novel or become absorbed in playing a computer game". (Pimentel & Teixeira, p. 15) Though I agree with the "suspending disbelief" component, I do not agree with their reading example and I believe that my definition of total-immersion is more specific and accurate than theirs as it insists upon the importance of macro-perception and an encompassing *total* visual field (given individual measures of susceptibility and a measure of depth and complexity of the visual data-field). Once this distinction has been made it becomes easier to trace various forms and levels of artistic immersive intent back through history and prehistory (Bersani, pp. 50-51), always bearing in mind that the intention and ideal of encasing total-immersion has changed radically as simulacra technology changes.

It is art's *feeling for opulent fulfilment delivered through atmosphere*, an immersive virtual atmosphere which embraces us, which is what separates out artistic immersive events, ideals and intents from ordinary immersive acts, such as the entering of each and every room, bed, and bath. Naturally even this distinction evokes thought-provoking philosophical questions concerning the relationship between art and life, a distinction which much late-20th century vanguard art has called into question. (Lucie-Smith) Performance Art, for example, has forced us to come to grips with the boundlessness of the question of art and life (the question of *what is art?*) through its capacity to confuse the boundaries between art and autobiography, through its use of effectively ambivalent representation and its presuppositions of personification. (Kirby, 1969) Performance Art has been an important moral force in its inoculation against elitism by implicitly posing challenging counter-hypotheses concerning the High Art tradition of the West (Goldberg, 1988), as do particular aesthetic themes and issues from the non-Western African, Chinese, Japanese, Indian, Islamic, Navaho, and other indigenous pre-colonial cultures in other ways which will remain unexamined here. Regardless of these poignant philosophical challenges which performance and non-Western art provokes in my distinction between artistic immersive events from ordinary immersive acts, I will maintain this distinction between art and life, for, as Marcel Duchamp (1887-1968) said, the fact that ready-mades are regarded with the same reverence as objects of art probably means he failed to solve the problem of trying to do away entirely with art. (Cabanne)

Traditionally in art the frame serves as a containing indicator, a type of delimiting sign that says "*art*" but hypothetically bears no meaningful resemblance to its enclosed referent. Its ideal is to refer not to itself but that which it contains. Thus it strives for the condition of invisibility (or at least peripheral unconsciousness). Immersive technology (and the shifts it engenders theoretically) eliminate the framing circumference, altering

the ratio of what can and cannot be noticed as art. Inside VE^oart, space's outmost boundaries may appear radically expanded and this is precisely how immersive consciousness exceeds habitual consciousness. This artistic immersive consciousness may function then as a trellis for a larger immersive backdrop of consciousness which holds the potentiality of undermining our habitual mental reliance on point-perception, as will be demonstrated through various artistic examples in Section B. It then is possible to outline a state of greater immersive awareness on the grounds that it includes through sensorial resonance previous immersive conditions within a general greater awareness of the multiple/unified acuteness of immersion in its pleonastic (perpetual) state. This assertion on my part concerning general immersive consciousness as being *sensorially reverberating, incessant, multiple, and unified* as understood via the holonetric model received some external support from Michio Kaku and Jennifer Thompson in the newly revised edition of their book *Beyond Einstein*. In the book they purport to have attained the (or an) elusive unified field theory which explains the universe as an incessant totality, a problem which escaped Einstein after all his best efforts and those that followed him. They termed their theory the *theory of superstrings* and it, similar to the way I propose the degrees of reverberating multiple/unified immersion combine into an all-inclusive account of immersion, achieves totalisation through *sympathetic vibration* (Kaku & Thompson), just as strings of a piano vibrate in sympathetic agreement, especially when tuned to the tuning system called *just intonation*. Just intonation, in music, is a system of tuning in which the correct size of all the intervals of the scale is calculated by different additions and subtractions of pure natural thirds and fifths (the intervals that occur between the fourth and fifth, and second and third tones, respectively, of the natural harmonic series). Supposedly used in medieval monophonic music (melody without harmony) and considerably discussed by 20th century sound artists and art-music theorists, just intonation proved impractical for polyphonic (multi-part) music and was replaced at least by the year 1500 by meantone temperament.

Aesthetic immersive consciousness, particularly when comprehended as pre-pleonastic, may be said then to be in a vibratory self/non-self referential mode and thus illustrative of what Metzinger sees as the "infinitely close and at the same time infinitely distant" (Metzinger, p. 14) characteristic implicit in all states of consciousness. This pre-pleonastic vibratory comprehension, which illumines Metzinger's attestation, occurs by way of the distance that the artifice of immersive art confers to consciousness; an artifice which lends itself to a reactive self-attentive unification. As such immersive artifice works to circumvent the current fragmentary view of the body/mind in the world which has been underpinned by the Cartesian/Newtonian model of optical physics. (Haber & Hershenson) Based on these understandings of immersive consciousness, the immersive theory emerging here should develop means for achieving insight into how the agency of visual thought (Arnheim, 1971) works when we release it from its frontal obligations. To achieve such an examination would be to overcome the tendency for aesthetic visual thought to analyse itself in terms of a presumed separation between the process of visual thinking and the content of visual thought which is its product and this view of immersive consciousness clarifies an initial issue of immersion in one grand sense.

Since visual thinking is shown to be a process consisting of the transformations of neuro-physical visual-thought impulses impregnated in continuous waves, our visual thoughts are not distinct from visual thinking. (Dennett, 1991) Similarly, immersive visual thought, visual thinking, and visual thinker make up a reverberating, incessant, multiple, and unified continuity.

I realise that this comprehension is nothing more than visual aesthetics catching up to basic science today. (Moriarty) As the analytical philosopher Thomas Metzinger says, "...in the physical outside world there are only electro-magnetic oscillations of certain wavelengths..." and that in a scientific look at reality, "...all we find are myriads of subtle electrical impulses." (Metzinger, p. 15) Taking it a step further in seeking the field of contact between the inner cognitive world and the outer penetrable world of physics (a virtual realm which I posit is the veritable domain of art), it makes sense to see thinking, thought, self, and experienced immersion as a non-localised flow of reverberating, incessant, multiple, but hyper-unified frequencies in which self-conscious immersive manifestations occur through immersive awareness.

AIX: Jean Baudrillard's Media Immersion Verses a Consciousness of Latent Excess

...we all live in "simulations" since everything is a construction...

-Maren Köpp, *Virtuality and Subjectivity*

The unreal is no longer that of dream or of fantasy, of a beyond or a within, it is that of a hallucinatory resemblance of the real with itself.

-Jean Baudrillard, *Simulations*

The cyberspace experience is destined to transform us in other ways because it is an undeniable reminder of a fact we are hypnotised since birth to ignore and deny, that our normal state of consciousness is itself a hyper-realistic simulation.

-Howard Rheingold, *Virtual Reality*

I am all sex. What I am not is moral thought, simulating and separating.

-Austin Osman Spare, *Book of Automatic Drawings*

...Plato discovers, in the flash of an instant, that the simulacrum is not simply a false copy, but that it places in question the very notions of copy and model.

-Gilles Deleuze, *Logic of Sense*

Criticism is only possible with distance, but Jean Baudrillard proclaims that there is no possibility of distance anymore in techno-mediocratic society. (Baudrillard, 1983a) This portion of the dissertation begins to explore the problematics of this proclamation and its refutation through an immersive art of latent excess. Thus here we shall theorise issues of contemporary societal immersion and threshold excess in the Baudrillardian context of a world culture where information now controls the flow (Baudrillard, 1987) and speed (Virilio, 1977) of consciousness. To summarise, the Baudrillardian position is that we live inside an increasingly global simulation where the dominance of media-forms engender, homogenise, hallucinate and drive communications via a rigidly methodical interactive network: what Baudrillard calls the *hyper-reality of simulation*. Observations concerning the sense of dissolving borders that once helped to separate the "true" from the "false" and the "real" from the "imaginary" were distinctly established in Jean Baudrillard's book *The Ecstasy of Communication*. (Baudrillard, 1987) In it (and in other books) Baudrillard theorised the media's effect on society in our immersive environment and argued that we had entered a post-modern era because, as he saw it, it is the production of images and information, and not the production of material goods, that determined who held power. (Bell, 1974) In the post-modern mediascape, according to Baudrillard, the private sphere of human intimacy is exteriorised and made categorical and thus diaphanous. In *The Ecstasy of Communication* Baudrillard described this diaphanous media effect as an instrument of *obscenity, transparency and ecstasy*. (Baudrillard, 1987) Artists and critics influenced by Baudrillard, and I include myself here, tended to elucidate a concern with images in the circulation system and were occupied with their recoding and perverse reuse, now recycled into a commentarial neo-conceptual art. Thus the Baudrillardian post-modern/neo-conceptual artist worked with cultural givens, trying to manipulate them in various ways, such as through noise, pastiche, collage, and/or jarring juxtapositions. The ultimate ideal aim

of the Baudrillardian artist was to appropriate circulating media signs in such a way as to elude being utterly dominated by them.

Baudrillard's *ecstasy of communication theory* described post-modern society of the 1970s and 1980s in terms of the presupposition that social immersion in media simulation (what he called *cyberblitz*) adds up to a new zone of experience. (Kellner) Baudrillard started rethinking media consumer theory in the light of what he saw as the excesses of the technological information society. (Bell, 1974) Baudrillard's previous works had emphasised the shaping of the consumer society and how it provided a new world of significance and value. In so doing he addressed issues of Marxism (Marx, K., 1967) and the general political economy. However, with his book *The Mirror of Production* Baudrillard broke with Marxism and moved away from his previous critique of the political economy towards a more systematic development of a theory of *simulation*, a radical semiurgy based on what he saw as the persistent uninterrupted proliferation and dissemination of signs. (Baudrillard, 1975) Thereafter he addressed media simulacra and the new information technologies which produced what Baudrillard called both *implosion* and the previously recapped *hyper-reality*. (Harvey) These hyper-real implosive circumstances developed for Baudrillard into what constitutes a new post-modern world which, in Baudrillard's theorising, obliterated the boundaries, categories and values of the previous non-hyper-real forms of industrial society while establishing new forms of social organisation and new forms of experiences. He views VR as a simple extenuation and perfection of this implosive hyper-reality.

We are, Baudrillard claimed, in a new (in my view immersive) hyper-real era in which the new technologies of media, cybernetic models, virtual systems, computer networks, and information processing supplant industrial production and the political economy as the organising synthesis/principle of society. Such a self-producing, self-regulating and self-referencing principle of total-hyper-reality (and its feeling of closure) was the essence of Baudrillard's philosophical propositions, propositions which I saw in totalisation terms and as essentially as an extenuation of Romanticism. Romantic in that those active in the era of Romanticism embodied a general longing for synthesis. (Stein) This desire was expressed and exemplified in the writings of Ludwig Tieck (1773-1853), Wilhelm Heinrich Wackenroder (1773-1798), Novalis, Clemens Brentano (1778-1842), Otto Heinrich Ernst Runge and Ernst Theodor Amadeus Hoffmann (1776-1822), all of whom theorised synthesis or experimented with it to one degree or another. Baudrillard's philosophy seems to me an extenuation of the philosophy of Romanticism in that it proclaims a *gesamt* resolution which is all-embracing in its use of the philosophical notion of a *cyberblitz zeitgeist* which envelopes (supposedly) all aspects of our lives. To grasp my point, one need only to glance at the title of Baudrillard's recent book *Ecran Total* (Total Screen) in which he submits, among other things, that the intrinsic objective of simulacra is to bring forward a malleable (but controllable) universal *modus operandi* bent on world domination through electronic media totalisation (the feedback-looped totality of computer terminals and television screens). For Baudrillard the computer and television screen are both depthless and infinite, a superficial

abyss and a hypnotic transparency which simulates and denies space at the same time. As he wrote in *Simulations*, the screen offers "an aesthetics of the hyper-real, a thrill of vertiginous and phoney exactitude, a thrill of alienation and magnification, of distortion in scale, of excessive transparency...". (Baudrillard, 1983a, p. 50)

Of course, when Baudrillard described the hyper-real condition as a transformation in which the code of production becomes the primary social determinant, he makes an important provocative point as he focuses our concentration on media, simulation, new technologies, and cybernetics. Among Baudrillard's most provocative assertions, as concerns this dissertation, are his reflections on the role of the media in forming the post-modern world and our place within it. In *The Ecstasy of Communication* Baudrillard puts forth a paradigmatic model of the media as an *all-over, engulfing, omni-present, totalising agent*. (Baudrillard, 1987)

Baudrillard began developing this theory in an essay entitled "Requiem for the Media" in *Toward a Critique of the Political Economy of the Sign* (1972). The title is ironic, for Baudrillard is only starting to advance a social theory in which the media plays an acicular role. By the late-1970s Baudrillard was interpreting the media as a devouring simulation machine which by hyper-reproducing images, signs, and codes comes to constitute an autonomous realm of hyper-reality. In "The Implosion of Meaning in the Media" Baudrillard claims that the proliferation of signs and information in the media obliterates meaning by neutralising and disintegrating all content through hyper-excess. He theorises that such a process leads to both a collapse of meaning and the destruction of distinctions between media and reality. In a society presumably saturated with media messages; information and meaning *implode* into noise, into pure effect without content or meaning. (Pierce)

Baudrillard uses here a model of the media as a black-hole that absorbs all information contents into a situation which no longer communicates purposeful messages. As content implodes into appearance, presumably the medium and the real are now seen in an indistinct, idealised, *totalised pattern*, from which there is *no critical distance* from which to oppose (or even surmise one would think) it. Dada and Surrealist techniques of uncertainty, irony, mockery and humour, all of which downplay reason - and particularly Max Ernst's (1891-1976) concept of "systematic displacement" (Lippard, 1970, p. 126), a technique which is concerned with the liberation of individual signs from their utilitarian purpose - are discounted as prototypes here; which is not as one might have hoped and expected after reading Baudrillard in *The Transparency of Evil* say that "...so long as there is a dysfunction in a system, a departure from known laws governing its operation, there is always the prospect of transcending the problem." (Baudrillard, 1987, p. 32)

Walter Benjamin, in his essay on the Surrealists, notes how their emphasis on excess and ecstatic encounters creates an opposition to the domain of purpose through an ecstatic excess which dissolves away the idea of the self as determined by controlling utilitarian purpose. (Benjamin, 1978) This is all-important to Benjamin for, writing in 1929, the aspect of the Surrealist movement which he saw as embodying its principal worth, was Surrealism's place in the political awareness and the struggle of socialist resistance against the rising threat of the irrational ideology of fascism. (Cardinal & Short) The dialectical step beyond intoxication (which is reached first by entering into it) is the beginning of a new realm of purposes, now directed toward the revolutionary transformation of an irrational social reality which insists on calling itself rational.

By ignoring such dysfunctional strategies, Baudrillard is able to claim rather that the masses can only incorporate media content, thereby neutralising meaning by demanding and obtaining more and more irrational self-contradictory spectacle/entertainment, thus further eroding the boundary between the media and the *real*. (Kellner) All modes of representation collapse into a realm neither real nor imaginary, but *simulatory*. In this sense, the media implodes into the masses to such an extent that we no longer know what effects the media have on the masses and how the masses process the media; thus constructing *a holistic circular totality without (apparently) an outside*. What this means in terms of immersion is demonstrated by what Baudrillard says in *The Ecstasy of Communication* as that "which was previously mentally projected, which was lived as a metaphor in the terrestrial habitat is from now on projected entirely without metaphor, into the absolute space of simulation". (Baudrillard, 1987, p. 16) By ignoring the potential impact of the Dada and Surrealist metaphoric procedures of juxtaposition which pertain to the liberation of the meaning of signs (Cardinal & Short), Baudrillard, in my view, misses the precision with which they remove from the image-world the closed familiarity of his "absolute" and leave information suspended in a plenum (vacuum state) of consciousness. When information is suspended, there is only the slightest difference between an intentional and an involuntary transcendence of reality. Such a collapse of utilitarian consciousness (combined with the pursuit of inexactitude) may create the unique intensity of abstract excess in our perceptual circuitry.

I will further explain how quasi-abstract excessive art achieves this lapidary incisiveness below in respect to my essay "The Art of Excess in the Techno-mediocratic Society", which was written as a mildly corrective retort to many of the totalising positions which Baudrillard put forth, as well as a reply to Peter Halley's totalising theoretical assertion that all relationships are geometric (Halley) (as opposed to rhizomatic; which was my view, as the flows, folds, excesses, and repetitions of the virtual describe a perpetual decentering rather than any geometric stability). This rhizomatic and labyrinthine view of post-industrial society takes into account the rich ensemble of relations possible: the diversity, the unexpected links, the ruptures, the amalgamations, the connected heterogeneity which Deleuze and Guattari showed to us. Their vision of post-industrial life re-opened the way for the production of subjectivity in art by affirming the befittingness of variety and the necessary right to dissension. (Deleuze & Guattari, 1987)

As we have seen, for Baudrillard, media, information and communications neutralise signification by encompassing spectators in a glossy media-immersion, which he defines in terms of an inert absorption of images which resist meaning, rather than an active processing/production of significance. (Baudrillard, 1983a) But Baudrillard goes farther still and globalises this suppositional hyper-real media effect; thereby making the media homogeneously accountable for a hyper-reality which obliterates, he claims, the differentiation between interior and exterior space, which is presumably replaced by mediational amplitude. (Baudrillard, 1993) This, I wish to point out again, is quite a totalising generalisation. In making such a sweeping statement, Baudrillard reversed the propositions found in Marshall McLuhan's books *The Gutenberg Galaxy*, *Understanding Media: The Extensions of Man*, and *The Medium is the Massage*; all of which perceived media as extensions and exteriorisations of our human powers (McLuhan, 1964) even while questioning the relationship between medium and content. By contrast, Baudrillard argued that *humanity is immersed in the media, engulfed by it and consequently overpowered and overwhelmed by its excessive omni-present constrains*. (Baudrillard, 1983a)

Correspondingly, Baudrillard's book *Simulations* contained a chain of analyses of some of the ways in which diaphanous simulations have come to eclipse hyper-real society and immerse society in media contrariety. For Baudrillard, *simulacra* are reproductions of objects or events, while the *orders of simulacra* form dissimilar stages or *orders of appearance* in the relationships between simulacra and the real. He thereupon construed how simulacra came to eclipse social life, both historically and phenomenologically. (Baudrillard, 1983a) In *Simulations* Baudrillard claims that modernity broke with the united medieval hierarchy of signs and social positions by introducing an artificial, democratised world of diaphanous signs which valorised artifice, thereby shattering rigid medieval hierarchies and arrangements. (Baudrillard, 1983a, pp. 83-92) The Feudal Age, according to Baudrillard, had established a puissant social formulation and instituted a tight hierarchy of signs in the West which designated class, position and social status. (Borgman) During this era one could readily read from an individual's clothes and appearance his or her social rank and status. Signs at this stage were rigid, restricted, entirely limp and obligatory. In ensuing epochs the counterfeit sign became the paradigmatic mode of representation and the order of the simulacra begins. (Baudrillard, 1983a) With the loss of fixed values and the celestial decrees that the Christian Church granted to society in the medieval era, the post-medieval symbol (now capricious and diaphanous) is discharged from its standing of inflexible gothic hierarchy. As Baudrillard saw it, the sign now strove to reproduce nature and to ground its form in resemblance to nature.

Baudrillard's claims follow, assuredly, Walter Benjamin's examination of photography and film and particularly Benjamin's exposé of art's plight in relationship to mechanical reproduction. As is well acknowledged, according to Benjamin, art lost its original *aura* and thus became obliged to relinquish its

claims to exceptionality as a form of human endeavour capable of offering alternative (and ostensibly superior) experiences and models for better being. (Lovejoy, 1997a, p. 24) Benjamin brought into critical discourse an awareness that widespread integrated changes in technological conditions can affect the accumulated consciousness and trigger prevalent changes in cultural norms as he specifically analysed how photo-mechanical technology intervenes in delineating existence. He understood that through the mediation of machines, the inherent realm can be contorted and prejudiced, thus changing our awareness of it. (Lovejoy, 1997a, pp. 24-25)

However in post-modern society, with its electronic and digital simulacra, there is no longer a spent nostalgia for natural semblance and Warholian reproducibility becomes the fundamental logic and code of the information society. (Warhol & Hackett) This condition is first manifest, Baudrillard believes, in Walter Gropius' (1883-1969) Bauhaus, in which designed objects function as signs within a larger *gesamtkunstwerk* ideal of homogeneous functionality; a notion Walter Benjamin seems to confirm in his text on Charles Baudelaire when he says that in the wake of bourgeois culture "art (...) begins to have doubts about its function" indeed it "ceases to be inseparable from utility". (Benjamin, 1973, p. 172) In *For a Critique of the Political Economy of the Sign* Baudrillard states that "it is the Bauhaus that institutes a universal semantization of the environment in which everything becomes the object of a calculus of function and of signification. *Total functionality, total semiurgy.*" (Baudrillard, 1981, p. 185)

I shall be explaining in detail in BXVI from where Gropius developed his ideal of the total *gesamtkunstwerk*, and thereby counter Baudrillard's claims for a radical post-modern departure between the values of Medievalism and Modernism by illustrating how *gesamtwerk* ideals have existed at least as far back as the Gothic period and how their roots are well planted in the philosophical history of Romanticism, an historical supposition which I see Baudrillard as sustaining.

In *For a Critique of the Political Economy of the Sign* Baudrillard described the Bauhaus systematisation of designed objects and architecture consistent with *gesamtkunstwerk* homogeneity and then extends the notion into post-modern cybernetic systematisation, in that the Bauhaus had harnessed industrial developments and techniques to art (rather than rejecting them as Arts and Crafts largely had) as it sought to design buildings and objects which suited mass production by eschewing ornament. According to Baudrillard, such an abstract homogenetic systematisation connects its unifying locus even more tightly with this homogenisation of *total design*. The Bauhaus' *gesamtkunstwerk* synthesis of art and technology, in Baudrillard's view, anticipated technocratic and cybernetic projects by developing a whole system of objects controlled from above that would produce a functionalised realm in which the meaning of every object would be determined by its place and role in the extant system.

Although I agree with Baudrillard when he reiterates that (in general) most visual information is accepted by society rather passively, in my view, his way of conceiving of life as passive homogeneity is itself romantic idealisation, however supposedly critical or negative its ubiquitous aggregates propound to be. This is evident in *For a Critique of the Political Economy of the Sign* when Baudrillard writes, "...the whole environment becomes a signifier...". (Baudrillard, 1981, p. 186) Following on, he evinces the conquest of functionalisation and portrays post-modern society as one of "total control" and "total organisation" in which functionalised aesthetics are incorporated in the very cybernetic organisation of society. (Baudrillard, 1981, p. 186) Accordingly, Baudrillard concludes that the Bauhaus' gesamtwerk aesthetic ideals allegedly reach consummation in the structural formulation of the post-modern society by what he characterises as the previously mentioned *cyberblitz*: the electronic immersive state whereby individuals and society at large are subordinated to the effects of cybernetic codes and models; modulations of a society which aim at a consummate instrumentalisation and mastery. In Baudrillard's gesamtwerk (homogeneous) theory, simulacra plays a dominating role in social life to such an extent that previous enclosing boundaries dissolve altogether into a sublime homogeneity. All dichotomies between appearance and reality, surface and depth, life and art, collapse into a functionalised, integrated, and self-reproducing gesamt universe of passé simulacra models and codes. (De Bolla)

By contrast, in my 1993 essay "The Art of Excess in the Techno-mediocratic Society", which I wrote to support a travelling exhibition I curated for the Musée d'Arbois titled *Excess in the Techno-mediocratic Society*, I hypothesised that an art of latent excess produced in that kind a Baudrillardian milieu of image superabundance and information proliferation can problematise and hence enliven us to the privateness of the human condition, in lieu of the fabulously constructed social spectacle which engulfs and (supposedly) controls us. (Debord) As supporting evidence for this statement we have the quantitative studies of immersion conducted by the U. S. military which, all said, show that immersion is a very personal thing, in that each person has a different threshold between disbelief/belief which blocks or facilitates it. (Pesce, Kennard & Parisi) However, I accepted the Baudrillardian point that numerous people today dwell in the expanse of infotainment (with its instantaneous non-separability and ubiquity) and that is why I elected to title the essay and exhibition *Excess in the Techno-mediocratic Society*, for I wanted to ask just what should be art's contribution to the enlargement of understanding of our conspicuously excessive Western society. (Galbraith) This was the question I set myself in spawning this exhibit, catalogue, and subsequent *New Observations* magazine issue which I guest edited under the same title.

What I discovered was that, for me at least, art, when excessive in its own right, is capable of functioning, paradoxically, by nurturing in us a sense of polysemic uniqueness and of individuality brought about through a *counter-mannerist* style of reproducibility (ever more circuitous, excessive and decadent); a style which takes us from the state of the social to the state of the secret distinguishable I, by overloading ideological

representation to a point where it becomes non-representational. It is this *non-representational counter-mannerist representation* which breaks us out of the fascination and complicity with the mass media mode of communication. Thus the *repartie* (vivacious spiritual response) to Baudrillard's view of media-bathed society is an aesthetic *élan* constituted through private superabundance.

This aesthetic *élan* of superabundance reconceptualises art in terms of latent excess so as to grant art an unbridled zone. However, this character of openness (Eco, 1989), which an inception of the art of excess assumes, demands that we seek a liberation from custom, doctrine and influence, and that we grasp again the autonomy and priority of art as a special type of excessive ideological activity. (Marsh) The acknowledged probing at the outer limits of recognisable representation, the excited all-over fullness and fervour of this syncretistic probe, isn't a failing of communications within excessive immersive terms then; *it is its subject*. Such a copious realisation is insinuated through overloaded/excessive stimulus inasmuch as latent excess can represent every integrated meaning conceivable, for in the art of immersive excess the focal point is never circumscribed. The fusion of elements within latent excess are not, by definition, passively received and accepted. By nature of its conflicting excessive presentation, information is to some degree psychologically embedded and thus withheld even as it is inexorably displayed all at once to the limited nature of our human perceptive competence. (Carr & England) Thus immersive excess takes us away from the habitual focus of the picturesque. This excessive view (the quintessence of immersive space) works when the immersive bubble dominates over frontally conceived configurations. It is a consciousness of the immensity of the immersive ground which potentially liberates us inwardly from the infringements stemming from the deluge of mass-media images and which stimulates us to assess anew the calibre of any such infringement. Immersed within the excessive ground of representation, we must interrogate the validity of our sense of simple binary image oppositions. Hence it is in the amity felt with the excessive ground that we feel a sensuous liberation from ideological monotony and cultural prudery.

Banal depictions of ideological content are flawed in the immersive/excessive field for they close the spectator and the creator off into ascertainable parcels of restricted implications which preclude the concept of freedom of thought. There must be a subliminal infinity about the immersive/excessive field, an overloaded incompleteness which lures us to the inspiration of individual sovereignty; the idea of our own unclear and denuded fourth-dimensional realm. (Ouspensky) The art of immersive excess frees us then from accustomed coyness, platitudes, and predetermined perceptions with which we are deluged daily by the mass-pop media. It is my experience that it is in this artistic condition of privately excessive formlessness that we can ascertain the delimitation of mass-pop media ideology and the resultant implications of that cognisance.

An art of immersive excess never offers us conventions then. Rather excessive/immersive art is like a fertile seedbed which undermines the hitherto clear distinctions falsely made between representation (identity) and

the imagination by way of negating and recombining. Here semblances and spaces are always already connected within a dark and obscure excessive orb as the art of immersive excess negates representations (and all they imply), thereby affirming a consciously divergent way to see and exist. The excessive artistic ground can therefore spawn in us a sense of affinity which communicates individuality in totality without forfeiting liberty.

Imaginative excess stands in defiance of the limits of ordinary perception and representation then. Thus it is (or can be) about the opposition between the daily work day and the sacred/sexual, transgressive/ecstatic moment. (Lewis) In a sense it attempts to set up a stable form of ecstatic transgression where one can go back and forth at will *via dissimulation*.

I should say that most all of my ideas on this subject stemmed from the reading of Georges Bataille's *Visions of Excess* (which appeared in English translation in 1985) after which I began to experiment with (and analysis through my artwork) various artistic approaches towards latent excess. In the terms Bataille proposes, any "restricted economy", any sealed arrangement (such as an image, an identity, a concept, or a structure) produces more than it can account for, hence it will inevitably be fractured by its own unacknowledged excess, and in seeking to maintain itself, will, against its own rationalised logic, crave rupture, expenditure, and loss. More specifically, for Bataille, the term *expenditure* describes an aspect of erotic activity poised against an economy of production. (Bataille, 1985, pp. 116-129) Librarian, libertine, paleologist, archivist, radical thinker, author of erotic fiction; Bataille took an active role in the mid-20th century Parisian avant-garde art and literary scene by objecting to what he saw as the aestheticism and sentimentality of the Surrealists. Consequently he became André Breton's (1896-1966) antagonist from the intellectual ultra-left. After World War II, as founding editor of the journal *Critique* and after authoring the transgressively philosophical books *L'Expérience Intérieure* (Inner Experience) (1943), *Le Coupable* (Guilty) (1944), *Sur Nietzsche* (On Nietzsche) (1945) and *La Part Maudite* (Accursed Share) (1947), Bataille's thought emerged as a viable alternate to Jean-Paul Sartre's then reigning philosophical school of Parisian Existentialism. (Sartre, 1965) Yet Bataille's accomplishment transgresses disciplines and genres so repeatedly and so thoroughly that capsule accounts of his oeuvre are compelled to delegate themselves to abstractions. However, one can say with assurance that his thinking consisted of a meditation on, and fulfilment of, *transgressions through excess*.

Bataille's *Visions of Excess* immediately impressed me as it resonated handsomely with the overloaded nature of my palimpsest-like gray graphite drawings from the early-1980s (which were reflective of the time's concerns with the proliferation of nuclear weapons, the threat of nuclear holocaust (Schell), and the excessive nature of the Ronald Reagan military build-up; the largest in the history of the world). (Levidow & Robins) To put a number on this excess I refer the reader to Robert Romanyshyn's report on the situation of the mid-

1980s where he conveys the fact that in 1986 the world spent "an average of 1.7 million dollars per minute on weapons", with the U.S.A. spending the most. (Romanyshyn, p. 245) These drawings were subsequently digitised and developed into my first digital computer-robotic assisted paintings of 1986. (Lovejoy, 1997a, p. 156)



Joseph Nechvatal, *Integrating Web*

Much of what I have delineated here as my theory of immersive excess will be germane to my interpretation of the Apse in the Grotte de Lascaux in BIII, an immersive space which I take as emblematic of immersive ideals in general.

AX: Today's Immersive Weltanschauung: Allocentric Eyes Within the Holographic Summum Bonum

The only thing that can be brought into cyberspace is the self.
-Mark Pesce, *Understanding Media: The End of Man*

First, I am dealing with no object. Perception is the object. Secondly, I am dealing with no image, because I want to avoid associative, symbolic thought. Thirdly, I am dealing with no focus or particular place to look. With no object, no image and no focus, what are you looking at? You are looking at you looking.
-James Turrell, *James Turrell, Air Mass*

One is necessary, one is a piece of fate, one belongs to the whole, one is in the whole...
-Friedrich Nietzsche, *Twilight of the Idols*

A new metanarrative, based on the story of the universe and its generative qualities, will soon create a new world view that will affect all areas. It is a story which grows directly out of the post-modern sciences of complexity and is thus both true and mythic.
-Charles Jencks, *What is Post-Modernism*

The holomatic principle is that each network interface is an aspect of a telematic unity: to be at any one is to be in the virtual presence of all others throughout the network.
-Roy Ascott, *A list of definitions and terms coined by Roy Ascott*

This portion of the dissertation will begin to address the psychic drive for the aesthetic satisfaction attained in entering perceived hyper-totalities which I detected in the contextual research of the atmosphere surrounding immersive *gesamtkunstwerk* issues, some of which I touched on previously. The ability to think in nominal terms of abstraction is the key requirement necessary when considering the credulity of wholes and totalities and their make-up, in that nominalism teaches us that abstract concepts are names for individual things, and that there is no reality corresponding to abstract concepts. (Gosselin)

When one is fully immersed in an intensive, synthetic, feedback-looped perceptual hyper-totality, the issue of the contrivance of homogenous sets and subsets emerges and impacts on the full analysis of immersive art. In fact it is imaginable to say that the consciousness of *subsets immersed within abstract sets* is a consequential understanding of immersion in that even when one is fully immersed in a synthetic totality, one still exists within other, larger, synthesised totalities. From a philosophical perspective, *synthesis* is the procedure by which once thought separate elements of a system are assembled into a superior ideal union of an undivided whole, so that the consequent unity is something more than the mere sum of its unmitigated parts. Synthesis proceeds from the stand-alone separate elements discerned by analysis, but it supersedes analysis by raising the particulars up to the point of being conscious of their larger comprehensive framework. Such amalgamic thought unites multiplicity into a *gesamt hyper-oneness* which we may eventually call indicative of *immersive culture*.

The task of writing a history of immersive culture is assisted through understanding specific sets of *ideal imaginative beholdings* and in understanding immersion through what Sigmund Freud called a *weltanschauung*: an ideal "intellectual construction which solves the problems of our existence uniformly on the basis of one overriding hypothesis, which, leaves no question unanswered and in which everything that interests us finds its fixed place". (Freud, 1933, p. 622) More broadly the term *weltanschauung* has come to mean a *blending of idealism and materialism* into philosophical, political, scientific, religious or just private *ways of perceiving the world* (or not perceiving it). It is different at different times and there are different *weltanschauungs* at any one time. (Wollheim, 1974) Specific artworks are products of various metaphysical *weltanschauungs*, as art both is made by and in turn makes its surrounding culture. Still, even the proclamation *culture* presents a set of highly ambiguous notions in that the word *culture* has instantaneously conflicting insinuations, and it is invariably best to observe scrupulously the context of its use. For some it means High Art, but for others (this author included) the word has more anthropological applications where culture represents less hypothetical measures of excellence than a widespread *way of seeing and being*. (Williams) It is this usage and intent which brings the notion of culture closer to that of the *weltanschauung*.

Paradoxically, the traditional opposite of culture, *nature*, may be established as an inception that could exclusively have been created by culture. On the other hand, it is equally possible to argue, as Gilles Deleuze does with his statement "artifice is fully a part of nature" (Deleuze, 1984, p. 124), that civilisation and all its production subsides within nature, however ostensibly distinct they seem to be. Regardless of these fascinating mirrored counter-definitions, for the purpose of this study I accept the tacit presupposition that aesthetic culture refers generally to non-utilitarian endeavours. A useful reference in sorting out what is meant by culture in general is Clyde Kluckhohn's *Mirror for Man* in which the following meanings for the word *culture* are suggested.

1. the total way of life of a people
2. the social legacy the individual acquires from his group
3. a way of thinking, feeling, and believing
4. an abstraction from behaviour, a theory
5. the way in which a group of people behave
6. a storehouse of pooled learning
7. a set of standardised orientations to recurrent problems
8. learned behaviour
9. a mechanism for the normative regulation of behaviour
10. techniques for adjusting to the external environment and to others
11. a precipitate of history
12. a behavioural map, sieve, or matrix

In that my theoretical aim is to establish an understanding of the *omni-expansion of the allocentric subject which ideally occurs in aesthetic immersive situations*, my emerging immersive theory will connect to definitions 2, 3, 5, 6, 8, and 10.

As previously established, any single simplistic explication of the function of art (a concept which has no single function, but several) within Western society today would be inapt. However by examining the various definitions offered over the centuries we can see that the idea of art has primarily developed out of notions of anthropomorphic aesthetic agency displayed through, at first, manual dexterity and then intellectual stratagems concerning collective or intimate exposition. As this embraces many types of production that are not conventionally deemed to be art, perhaps a better term for art would be *culture* as defined above in definition number 1: *as a totality*. This would explain why certain pre-industrial cultures produce objects which Eurocentric interests characterise as art even though the producing culture has no linguistic term to differentiate these objects from utilitarian artefacts. (Geertz, 1995)

In examining the above concept of *art as culture-totality* I found the Germanic terminology *geistesgeschichte* (which means a history of mind in a cultural sense) useful as brought to my attention by Max Dvorák in his *History of Art as the History of Ideas*. (Dvorák, 1984) To further elucidate the meaning of *geistesgeschichte* as the history of ideas (or intellectual history) it is worth remembering that if the natural sciences explain events as the result of causal laws, culture should explain events in terms of the meanings and intentions that people give them. (Kearney, 1991) These meanings and intentions however are informed by historical and social change, particularly the total-outlook peculiar to a given period (its dominant *weltanschauung*). Furthermore, isolating or giving undue priority to any one element which makes up the primary interpretative material can skew an interpretation and thus falsify it through oversimplification.

Inspecting the current total-outlook in today's cultural *weltanschauung* terms, necessarily requires a subsidiary look at of the concept of omnijectivity. As previously mentioned in AVII, this key immersive concept arose out of the discoveries of quantum physics, a non-spatial physics (and logic) which Clarke has shown to parallel the workings of consciousness itself. (Clarke, pp. 236-240) More specifically, the concept of omnijectivity emerged from the theories of quantum physicist David Bohm (1917-1992), protégé of Albert Einstein, and Karl Pribram, author of the neuropsychological textbook *Languages of the Brain*. Pribram noted how modern theories of how the brain stores memories did not explain how memories seem to be distributed throughout the brain as a whole. Each memory a person has was believed to have a specific location somewhere in the brain cells. Pribram, however, made the discovery that memories indeed are not localised, but rather that they are somehow spread out or distributed throughout the brain as a whole. Even when large damage is done to a brain, or pieces of it are removed, organisms don't lose sections of their memory. He knew of no process that could account for such a phenomenon. Finally the process that made the

most sense in metaphorically explaining this aspect of the brain was *holography*. Therefore Pribram offered the holographic model as an explanation of the functioning of the brain. (Pribram)

In 1947 Dennis Gabor described the principles of *holography* as where every tiny portion of holographic film would contain all the information recorded in the whole. Hence holography helped explain how it is possible for every part of the brain to contain all of the information necessary to recall a whole memory which Pribram had proved by conducting experiments on rats. Rats, after having been taught to run through various mazes, were operated on and designated portions of the rat's brains were surgically eliminated. Pribram found that no matter what portions of their brains were cut out, their memories of how to run the mazes were not eradicated. If memories had specific locations, then the rats would not be able to run the mazes after the *memory* had been cut out. By adapting a holographic model, this discovery could be elucidated as each piece of holographic data contains the whole image. (Talbot, p. 17) However, memory is not the only holographic process in the brain. *Vision is also holographic*. The part of the brain that interprets what the eyes see is also unaffected by large-scale damage of the brain or by removal of parts of the brain.

But Pribram was not alone in adapting the holographic model in explaining reality. David Bohm also arrived at the conclusion that *the universe operates under holographic principles*. Bohm, who had studied at the University of California, Berkeley with Julius Robert Oppenheimer (1904-1967) (noted theoretical physicist and director of the Los Alamos Laboratory during the 1943 to 1945 development of the atomic bomb), received his Ph.D. in Physics in 1943 and taught widely before becoming professor emeritus of theoretical physics at London University. His explorations into the nature of consciousness were stimulated by Jiddu Krishnamurti (1895-1986) and later by the Dalai Lama. (Peat) His most celebrated book is *Wholeness and the Implicate Order* in which he expresses his disinclination with the previous prevailing interpretations of quantum theory and suggests that an unseen order is at work beneath the ostensible chaos (Gleick) and lack of continuity of the individual particles of matter. (Cushing, Fine & Goldstein)

Bohm had been dissatisfied with the unexplained dual nature of subatomic particles, the fact that they behave sometimes as particles and sometimes as waves. According to Bohm, the holographic model explains it. Hence Bohm claimed that though our plane of reality makes it seem as if things are separated, at a deeper level of reality everything in the universe is part of a *total unified continuum* (thus subject and object coalesce in omnijectivity). (Peat) Holographic film is an appropriate model, according to Bohm, because of its implicate order, as the image is encoded in the film's interference patterns. It contains a hidden *perceptual totality enfolded throughout the whole*. Equivalents to this recognition exist in fractals in the sense that they present a system in which all parts are encoded into the structure of the whole; that a small extract contains, or has enfolded within it, the essential features of the whole. (Mandelbrot) The hologram projected from the film is an explicate order because it represents the unfolded and perceptible version of the image. This relational

structure means a mutual and dynamic coexistence where each "part" depends in its being on the other "part". This relational structure theorises a *space/time matrix* (the enfolded order) which in itself has no mass or density but is the source of all that we call matter. This implicate order acts like a projector of the explicate order in a way which can be *likened to a hologram*.

Hence Bohm sought to develop a theory of reality that would be *inclusive* and *whole* (Peat), a coherent hyper-spectacle of omnijectivity in which things hook together. (Sharpe) As Bohm said in his key book *Wholeness and the Implicate Order* (a book which defines a seamless physical order of continuous wholeness), "I would say that in my scientific and philosophical work, my main concern has been with understanding the nature of reality in general and of consciousness in particular as a coherent whole, which is never static or complete but which is an unending process of movement and unfoldment". (Bohm, 1980, p. 9) Also in the book Bohm emphasised the distinction between wholeness and holism, because he felt some holistic theories have had very negative effects in the past.

Surely incoherent views of the whole have been destructive, as Boris Grois' book *The Total Art of Stalinism: Avant-garde, Aesthetic Dictatorship, and Beyond* substantially makes apparent. However, in rejoinder, Bohm points out that if we think of totality as constituted of independent fragments, then "that is how our mind will tend to operate", but if we can "include everything coherently and harmoniously in an overall whole that is undivided, unbroken, and without a border" then our mind will tend to proceed in like fashion, and "from this will flow an orderly action within the whole". (Bohm, 1980, p. 11) When looking at a whole, we must also do justice to the parts and understand their relative independence. This concept is Bohm's *implicate order*, the source of all the perceptible explicate matter of our space/time world. (Peat) According to Bohm, the world we live in at the most evident and superficial level is the three-dimensional world of objects, space and time; what Bohm calls the *explicate order*. A lucid comprehension of the world only becomes possible by understanding a deeper level, the *implicate order*. On the space/time-matrix explicate plane, certainly both things and events strictly are disassociated, but immersed underneath the exterior, on the implicate frequency level, *all things and events ultimately are one total unanimity*, thus omnijective. This implicate order is the enfolded order which, in Bohm's theory, is unlimited; containing a super-implicate order, a super-super-implicate order, and so on, each level being more perspicacious than the last. (Sharpe)

As previously indicated, Karl Pribram reached corresponding conclusions separately from Bohm respecting the meaningfulness and expressiveness of the holographic/omnijective model. In his book *The Holographic Paradigm and Other Paradoxes* Pribram sums up his theory about consciousness by saying that mental qualities are the permeating organisational principles of everything in the universe. (Pribram) Clearly the universe includes the brain; thus jointly with Bohm, Pribram became an architect of the

holographic/omnijective paradigm by stating that the brain acts like a hologram which perceives and takes part in an omnijective universe.

What makes it difficult to grasp this concept (but we must grasp it if we are to understand the wider implications of immersive art) is that we are not looking at a hologram from a removed and critical distance, but *we are part of the hologram*. This concept is immensely important to *Immersive Ideals / Critical Distances* as it immediately addresses the conventional conception of aesthetic distance, the traditional audience's awareness that art and reality are not the same. Edward Bullough's (1880-1934) essay "Psychical Distance" in the 1912 *British Journal of Psychology* contains an early presentation of the conception. Bullough's explanation of *aesthetic distance* included a paradox in that, in his view, an artist's composition is fully efficacious when it is intimate, however the artist must contrive an artistic presentation by assumptions of detachment from it. *What is most desirable is the maximum abatement of aesthetic distance without its disappearance.* (Bullough) Consequently Bullough maintains that there is such a thing as *aesthetic consciousness* and that in order for aesthetic consciousness to occur the subject must have a distinct sort of demeanour towards that object of knowing. This unique attitude Bullough calls *psychical distance*. According to Bullough, this psychical distance attitude has both negative and positive aspects. The negative aspect is the blocking out of pragmatic thoughts, feelings, impulses and actions. This negative aspect, in turn, makes possible the positive aspect, which is a contemplation and appreciation of the features of the object of consciousness. (Bullough)

The Bohmian/Pribramian concept of holographic/omnijective immersion, though lucid from the pinnacle of hyper-spectacular thought, is thoroughly abstract and defies most direct perspicacious exposition. Fortunately, the intuitive discernment necessary to fathom non-dualistic, holographic, and omnijective principles is a special quality of the human mind which immersive art especially abets given its inclusive coherence and enveloping suggestions of perimeterless aesthetic entirety. The level of abstract difficulty found in conceiving and accepting the holographic/omnijective understanding indeed is another indication of how radical a revision Bohm and Pribram are making on occidental thought. Paradoxically, ancient philosophies of India (the Vedas are considered the most ancient texts known to humanity at an estimate of at least 12,000 years old) are better equipped to understand the indivisible nature of the universe. In the Vedas the part is recognised as being of the whole. Verily this tenet is basic to the unitary philosophy of Yoga; a system of solicitude established during the Indus Valley civilisations more than 5000 years ago. (Havell) The principle of *Brahmanism* (*Brahman* is the term used to refer to a transcendental omnipresence connected with the characteristics of loving consciousness) is the harbinger of both Hinduism and Buddhism and provides us with the oldest texts and best preserved metaphysical system on our planet. (Coomaraswamy, 1956)

*The Brahman which has been thus
described is the same as the*

*ether which is around us;
And the ether which is around
us, is the same as the ether
which is within us. And the
ether which is within us,
That is the ether within the
heart. That ether in the heart
(as Brahman) is omnipresent and
unchanging. He who knows this
obtains omnipresent and
unchangeable happiness.*
-Khandogya Upanishad, III Prapathaka, 12, Khanda, 7-9

Relevant too is the system of Indian Buddhist *Tantra* (which means *woven together*), a term loosely applied to a system of Hindu yoga in which the sexual union of male and female principles are worshipped through a sexual ritual in which leisurely, non-orgasmic intercourse is performed as a way to experience the ethereal one. (Yamamoto) Great temples have been created in service to this philosophy, such as the famous temples of Khajuraho in Madhya Pradesh (Central India) built between the 9th and 13th centuries (the Chandela dynasty) where a throng of sexual positions are illustrated via teeming copulating carvings which cover the temple's exterior. A Tantric adept meditates on the carvings and by so doing frees the psyche from sexual desire so to enter into the inner emptiness of the temple. (Havell) Additionally, Sufis embrace the ancient Greek philosophers' idea that the macrocosm is the microcosm. (Critchlow)

Similarly, with an omnijective/holographic understanding of immersion we are no longer looking at an outside *weltanschauung*/universe but rather we are looking at ourselves (thus necessarily critically removed a half-step) seeing our own eyes holographically process a holographic environment. For Pribram, this understanding made him realise that the accustomed objective world does not exist. Rather Pribram explains that we have two very different aspects to our reality: as physical bodies moving through space and as interference patterns enfolded throughout the universal hologram. (Talbot, pp. 54-55) Bohm believes this second option to be the most correct, for to think of ourselves looking at a holographic universe is again a faux abstraction, an attempt to separate two things that ultimately cannot be separated. (Sharpe) This interconnected and mutually immersive *weltanschauung* has been termed *holographic consciousness* by Mindell who states that this holographic-field theory of the universe and brain indicate *a world operating like a field*. (Mindell, 1988)

This theory/*weltanschauung* of holographic omnijectivity *elucidates immersions' ideal metanarrative and gives immersive art its truth value*. It does this inasmuch as the holographic *weltanschauung*, imbued as it is within the field of omnijectivity, provides an encircling holonetric outlook by which consciousness is recognised as a unitary enveloping phenomenon which (if it can be described reductively at all) can exclusively be reduced to a unitary condition of undifferentiated cognition. This comprehension is artistically

represented through accordant immersive gesamtkunstwerks which require immersive entrance, and finally, the self-construction of the immersive hyper-being.

AXI: Further Discussion of Total Models and Immersive Consciousness: (Sets and (Sub-Sets))

We build models of the world inside our head, using the data from sense organs and the information processing capacity of our brain. We habitually think of the world we see as out there, but what we are really seeing is a mental model, a perceptual simulation that only exists in the brain.
-Howard Rheingold, *Virtual Reality*

It is no longer a question of imitation nor reduplication, nor even of parody. It is rather a question of substituting signs of the real for the real itself.
-Jean Baudrillard, *Simulations*

VR will enhance the power of art to transform reality.
-Michael Heim, *The Metaphysics of Virtual Reality*.

Through applications of scrutiny and immersed involvement I intend to expose in this portion some of the gesamt model's chain of associations which formulate the metaphysics of immersive consciousness, by asking the question of what ways the essence of the immersive gesamt-kunstwerk is equivalent to an historical account of Western metaphysics? This is the specific question I shall address here.

At the heart of the previous discussion concerning weltanschauungs, totalising ideologies, immersive technologies, art ideals, and the constitution of immersive consciousness, is the intrinsic question of human *model fabrication*. Undoubtedly, totalising analogies at times in the past have been fatuously and unequivocally self-sententious in their urge towards perfectification, embellished (as they seem to must be) with a sort of self-significance and often fallacious sweeping universalism. However this thorny question of totalising weltanschauungs in terms of immersive art and immersive consciousness is at the hub of this investigation and so it beckons forth immediately the question of what models we make for ourselves, which do we prefer aesthetically, and why?

If the place to start answering these questions is with our own internal make-up, then we can immediately understand totalising analogies by knowing that *consciousness models itself as a whole*. (Churchland, 1986) We self-model our own consciousness (and being) into a totalised unit. Hence any philosophical project in search of a total theory of immersion demands that consciousness be self-aware that it is already always constructed as a "mental universe". (Metzinger, p. 33) Hence when occupied with questions of artistic and philosophical theorising, *it must be remembered that our abstract and ideal concepts may desire to adhere to our all-over, but unified, neurological configuration*. (Harland)

Moreover, in considering weltanschauung notions which entangle the difficult idea of the multiple in the unitary, Edmund Husserl's research into the conceptions of unity is instructive as he perceptively addressed the question of how we identify the plural within a unitary whole. In his *Logical Investigations* Husserl

located the grounds of multiplicity in the *mental operation of combining*, which he sees as a *psychological contrivance* and as a *synthesis of polysemic input into a closed set*. (Husserl, 1970) Husserl's transcendental phenomenology then is the recognition that various modes found within conscious totals correlate with *the unity of imaginative consciousness*. (Kearney, 1991, pp. 13-38)

Given the postulates of Churchland, Metzinger, and Husserl, we are now capable of formulating a quintessential characterisation of immersive art theory: that *immersive art partakes in an idealised and externalised form of omnijectivity based on our own ideas of our unity of consciousness*. As such it merits a comparative analysis with neo-Platonic philosophy; a philosophy which likewise locates consciousness within ideas of unity. Such a comparison is doubly meaningful in that neo-Platonic theory supplied Wagner (and his philosophical influence, the Romantic philosophers) the all-embracing *weltanschauungen* world-view which drove and contextualised the re-emergence of the ideal of the total-artwork.

As Frank Chambers explains in his book *The History of Taste*, "Romanticism was a mystical philosophy and thus committed to a metaphysical ideal." (Chambers, p. 178) The reason being, that the romantic mysticism of Johann Gottlieb Fichte, Novalis, and Friedrich Schelling was a circuitous counter-action against much of the overt rationalism of 18th century philosophy. Romanticism, per say, was the artistic and intellectual movement that originated in the late-18th century which accented pathos, fancy, and aversion to adhering to sociable etiquette in opposition to rationalist obligation. (Barzun) Romanticism announced a rebuff to the precepts of regulation, tranquillity, equilibrium, quintessence, and rationality that typified Classicism in general and late-18th century Neo-Classicism in particular (as exemplified in art by the immense paintings of Jacques Louis David (1748-1825)). Thus Romanticism was a counter-attack opposing the Enlightenment's ideals of strict materialism by accentuating the visceral, the inconceivable, the mercurial, the inner, the extemporaneous, the emotional, the extravagant, and the spectral. (Honour) Idiosyncratic of the romantic demeanour was the expanded valuation of the beauties of nature (and of architectural ruins) accompanied by a capacious aggrandisement of feeling over logic. This re-evaluation of ideal human responses was accompanied by a spiralling within the personality and an intensified inquiry into the individual personality with its moods and intrinsic verisimilitudes. (McGann)

In that the concepts of idealised totals is endemic to total-immersion (and thus is a major theme of this dissertation) and that they owe their Western ancestry to neo-Platonic philosophical tendencies, a further review of Neo-Platonism is salient to our concerns. Salient too because neo-Platonic thought predominantly appears in the romantic transcendentalists, such as in the influential work of Friedrich Wilhelm Josef von Schelling, the German philosopher who more than any set the itinerary for Romanticism and its *gesamt* tendencies which are pertinent to the elaboration of an immersive theory of art.

Schelling acquired academic eminence with a succession of philosophical publications, culminating with his *System des Transzendentalen Idealismus* (System of Transcendental Idealism) which was published in 1800. Jointly with Hegel, Schelling provided the key philosophical assertions in the augmentation of post-Kantian philosophy and his ideas severely influenced the course of Romanticism. Reality as a whole was regarded by Schelling as the manifestation of a spiritual vigour that initially operated unconsciously but that in conclusion consummated in self-awareness through the instrumentality of human thoughtfulness. Art represented the culmination of that operation. (Marx, W.) The artist's achievement was conceived by Schelling as being the culmination of this thoughtfulness at the level of consciousness, *revealing and manifesting the equivalent abstract impetus that underlay the elaborate phenomenon of nature.* (Nauen)

Thus with Romanticism, philosophy became again involved in the challenge of art, and conceptions concerning beauty were used to solve philosophical problems as Romanticism moved away from reason (as it had been conceived through the tradition of Aristotle's logic) and towards a revival of Platonism in neo-Platonic epistemology. (Stove) What particularly interests us here is that Platonic philosophy, and the Platonic tradition, uphold a dominant concern for values, and in judgements of values we implicitly calibrate them against ideals. (Copleston) However, according to Plato, we cannot ascertain such ideals directly by observing them because they are not evident in the physical world. Hence we determine these ideals (which Plato calls *Ideas*) in supplementary ideal worlds, disconnected from the corporal world (i.e., in a virtual world).

Plato's doctrine of Ideas put forth the dualistic proposition that the universe is composed of two basic substances: mind and matter. Moreover, Plato asserted that exceeding the many forms seen in nature there was a unifying principle (the field that grounds them) for which he frequently used the highly immersive metaphor of the sun. (Owens) It follows that our mind must imagine our being in uncustomary ideal realms. Furthermore, Plato postulated that the corporal world is only a manifestation of inference and hence does not actually exist. In Platonism, *Ideas* are what exist and which make up the orbit of being. (Russell, 1945)

Following these basic premises of Platonic thought are the voluminous attempts at a philosophical scheme of the neo-Platonic School. As a definite school, neo-Platonic theory originated in Alexandria, Egypt, where the intermixture of nationalities made for an amalgamation of philosophic tendencies indicative of the fact that while the system was a characteristic product of the Hellenistic consciousness it was largely influenced by the ideals and mystical tendencies of Oriental thought. Jewish speculation as well played a part as it (in certain stages of its theology) rejected anthropomorphic ideas of God in lieu of an abstract spiritual conception.

The genuine founder of the neo-Platonic School was the porter Ammonius Saccas (3rd century AD), a Christian who returned to Hellenism, however he left no written texts and it is thus difficult to determine his

exact relation to his successors, but among his pupils were Plotinus (AD 205-270) and neo-Platonic theory is based on the metaphysical explanations of Plotinus, particularly his *Enneads*. When Plotinus was 28 he was taken to hear Ammonius Saccas speak, and thereafter for eleven years continued to harvest the lectures of the porter. Through Ammonius Saccas, Plotinus saw that the essence of mystical knowledge resonates with our deepest level of being yet it persistently defies our logical minds, but, he asserted, that, like in holographic/omnijective consciousness, individual consciousness has a depth of extension equal to that of the universe itself. (Chaudhuri) Reality, according to Plotinus, is just this depth of space, this uninterrupted unified reflection of the depth of consciousness. According to Plotinus, we cannot see its extensive magnitude as such, as we are immersed in it completely and have no critical distance from which to perceive it. Indeed, this immersive dimension cannot be seen because it is how we think and see. It itself is the vitality of consciousness. (Stove)

In AD 244 Plotinus went to Rome and taught philosophy to Porphyry (circa AD 233-303), author of *De Antro Nympharum*, a consequential and elaborate interpretation and defence of Paganism which adapted Plotinus' teachings while putting extra emphasis on the importance of theurgic magical practices. In turn Porphyry's theurgic theorist work was succeeded by that of Iamblichus (circa AD 250-312) (who also emphasised the preternatural theurgic factors in Neo-Platonism) and Jamblichus (circa AD 255-315), who too maintained a belief in sorcery and theurgy (the art of compelling demons and other supernatural powers to produce desired results). (Catholic Encyclopedia)

Following, Neo-Platonism developed into an idealistic pantheistic/monistic philosophy tending towards the type of hagiographic mysticism which flourished in the Pagan world of Greece and Rome. (Denning & Phillips) It is of interest and importance to this reflection because it is the last attempt of Greek unitary thought to rehabilitate itself and address inherited Pagan polytheism through a unifying oneness. This poly-oneness (suggestive of the dual nature of the erstwhile explained rhizome theoretical model) abetted putting an end to Aristotelian rationalisation by ideologically immersing the subject into an unmindful appreciation of the many-one by enveloping the subject in the unifying properties of deranged ecstasis. (Chaudhuri) More will be said on this in connection to the origins of art in the Greek ecstatic rituals in BVIII.

With the establishment of Christianity, Pagan mysticism had waned. However when the ideas of Neo-Platonism began to flourish again, Christian writers took advantage of the sustenance they lent to their complimentary doctrine that there is an ethereal world more real than the world of matter. Later, there were Christian philosophers, like the late-4th century's Nemesius (circa AD 340-400), who took over the entire system of Neo-Platonism so far as it was considered concordant with Christian creed. Nemesius's theories considerably influenced later Byzantine and medieval Latin philosophical theology as Nemesius integrated elements from various sources of Hellenistic philosophical and neo-Platonic idealism (among other

influences). The result is a Christian synthesis in which he submits that the soul must be an incorporeal/intellectual manifestation subsistent in itself yet one with the body. Such body/mind teaching became a keystone of medieval and renaissance Christian theory, though further mediated by a spectrum of classical Greek theorists. (Internet Encyclopedia of Philosophy)

There were of course repressive oppositions to Neo-Platonism. The Christian school of Alexandria opposed the Gnostics, for example, who had attempted to construct a majestic system of higher knowledge based on the Christian viewpoint through assimilating various Greek and Oriental elements. Gnosticism worked the tenants of the Christian revelation into an extravagant hyper-spherical speculation on general metaphysical and cosmic problems based primarily on an abstract neo-Platonic Godhead which became the background for their system. (Stace) For example, the Gnostics conceived of the transcendent as an intelligible sphere whose centre is everywhere and circumference nowhere; interesting from our virtual immersive perspective.

Regardless of the ensuing heretic status most often attributed to neo-Platonic teaching, the author Pseudo-Dionysius (alias The Areopagite) (circa AD 465-510) drafted a systematic treatment of Christian mysticism in his neo-Platonic works where he carefully distinguished between rational and mystical knowledge, therefore exercising a great influence on subsequent centuries. (Pseudo-Dionysius) Pseudo-Dionysius, it is believed, was a Syrian monk who, known only by his pseudonym, wrote a series of Greek treatises uniting neo-Platonic philosophy with Christian theology and mystical theory. These writings established an unmistakable neo-Platonic trend in a large segment of medieval Christian spirituality and formed a total-theology which covered a full symbolic and mystical explanation of being. The system is essentially dialectical theology however, the simultaneous affirmation and denial of paradox in any statement or concept relative to totality (i.e., God).

Notwithstanding, it was not until the rise of Humanism in the 15th century that neo-Platonic texts were translated and studied with that zeal which characterised the Neo-Platonists of the Renaissance (where the theurgic elements in Neo-Platonism became all the more prevalent). Thus Neo-Platonism had a marked revival during the Renaissance, especially through the Humanist philosophers Marsile Ficin (1483-1499), Giovanni Pico Della Mirandola (1463-1492), and Giordano Bruno (1548-1600) and thereafter came down to our times implicitly in the theories of Schelling, Fichte, Hegel, and other leading 19th century Romantic philosophers whose ideas shaped those of the 20th century profoundly.

From the neo-Platonic perspective we understand that physical experience makes us consider that we are disconnected, when in actuality we are not. In remarkable parallel developments, 20th century science (Poincaré) found that it became increasingly difficult to keep detached from just such metaphysical contemplation. (Moriarty) With immersive attention the comprehension of both the universe and

consciousness as undiminished totality has re-emerged while the fields of physics and metaphysics appear to be dropping their separate distinctions to some extent and forming an intimate rendezvous in immersive art. This is so due to immersive art's attributes of presenting cohesion within apparent borderless excess. As immersive art exemplifies this dynamism, it newly fulfils art's ancient function as a model-maker of contemplative consciousness too abstract to be embodied in less circuitous human expressions.

Section B. Centuries of Immersion: Questions of Antecedent Immersive Culture and its Psycho-Immersive Dynamics

Truth stems from desire.

-Georges Bataille, *Lascaux: La Naissance de l'Art*

The information explosion is not a window on the future so much as a mirror of the past catching up with the present.

-Gene Youngblood, *Expanded Cinema*

As we have seen, Immanuel Kant's transcendental idealism, like neo-Platonic thought, argued that as the mind begins with disconnected perceptions we can never altogether perceive the omnijjective unity of the world. (Solomon) Nevertheless, Kant also maintained that the mind's *integrating intuitive faculties* can surpass scant disparate perceptions and that *intuition can suspend these categories of the individual senses as separate unrelated entities and experience them all together as a single unified totality*; and, in this manner, *we can fathom the knowledge of omnijjective unity*. (Murray) So from this contention we may conclude that there are no swaying logical comprehensive metaphysical explanations of our place in the world, only intuitive polysemic genus based upon culturally enfolded paradigms and artistic models which feel right when judged against our consciousness's peculiarity as a total entity. This modelling potential, given its various orders, degrees, and intensities of convincingness, is the prime function of immersive art. Thus in this section we shall study various examples of this modelling function as I have found and identified them in art historical contexts. Taken together these examples can be said to begin to build the basis of what I have termed *immersive culture*.

As previously stated, the cultural premise under investigation here is that VR's immersive/peripheral space is radically new even while being based on non-logocentric epistemological precedents and seedling immersive art experiments. Thus non-logocentric immersive art ideals, as identified and defined within various periods in various degrees, will be established here so as to be conceptually placed alongside the high-tech ability which computing power brings to the possible realisation of such ideals. Therefore I will construct the second portion of this discourse by identifying within miscellaneous historical periods those non-logocentric artistic strategies and practices which might contribute towards the development of an immersive theory of culture based in the visual arts. Though sound is integral to total-immersive experience, the human being is primarily a seeing animal and the most plentiful information comes to us via our eyes to our consciousness. (Merleau-Ponty, 1964) 38% of the fibers entering or leaving the central nervous system are in the optic nerve and it is estimated that as much as 75% of the information entering the brain arrives through the eyes. (Youngblood, p. 46) So, coming as I do principally from the visual arts, the optic component of immersion will receive principal interest here. Nevertheless it is useful to remember that this component is only the

primary element in indispensable harmony with the other senses inside of immersive art environments.
(Begault)



brain-eye rapport

The concept of non-logocentric immersion is not one that we are accustomed to applying systematically to culture and to the visual arts of the past, but on examination it turns out that omnijective intentions and non-logocentric based activities are present in various degrees and orders in a wide number of divers artworks and art theories. In this sense I will demonstrate here that there has been a micro-tradition of immersive art, a tradition which can be situated in the concept of total-immersion in VR ideology presently. Obviously we need to learn a great deal more about this tradition: about its sources, internal developments, spiritual affinities and its cross-cultural manifestations. However, with only what I have researched here, we shall see how this newly discovered micro-tradition's concern with immersive fulfilment leads ultimately to an alternative conception of the relationship between once held ideas of being, art, sex, and death.

As the intent of my research is to find and define unifying principles of immersion by examining the diversity of immersive non-logocentric intentions in relationship to the various styles which periodically express them (as employed by artists and art theoreticians), such a theory requires the formulation of common apparent ideals between particular immersive aesthetic circumstances. Thus in order to explore a set of questions surrounding immersive aesthetic experience, I will arrange in this section of the dissertation an array of artworks and theories of art into a blueprint for artistic immersive consciousness by articulating their underlying principles of immersive intent (i.e., their ideal constitution as immersive art).

Concerning illustrement, the copious images accompanying this text (photos selected unrestrictedly to permit a fluid handling of supporting visual data as fully as required) cannot compete with the immersive experience itself, simply because no discrete rectilinear reproduction can. They cannot do the remotest justice to an immersive experience other than to illustrate details of what I am discussing in the text, for immersive consciousness reserves itself for those who go inside and holonogicly look around in every direction for themselves.

BI: The Cavernous Dialectic: Approaching Underground Ambient Aesthetics

...imagination is the foundation of scientific work; there is no escape from it, but the first use to which it should be put is to devise material means for keeping it within reasonable boundaries.

-André Leroi-Gourhan, *The Art of Prehistoric Man in Western Europe*

I've found the term "Paleocybernetic" valuable as a conceptual tool with which to grasp the significance of our present environment: combining the primitive potential associated with Palaeolithic and the transcendental integrities of "practical utopianism" associated with the cybernetic.

-Gene Youngblood, *Expanded Cinema*

The passions which belong to self-preservation, turn on pain and danger; they are simply painful when their causes immediately affect us and delightful when we have an idea of pain and danger, without being actually in such circumstances. This delight I have not called pleasure, because it turns on pain and because it is different enough from any idea of positive pleasure. Whatever excites this delight I call sublime.

-Edmund Burke, *A Philosophical Enquiry into the Origin of Our Ideas of the Sublime and Beautiful*

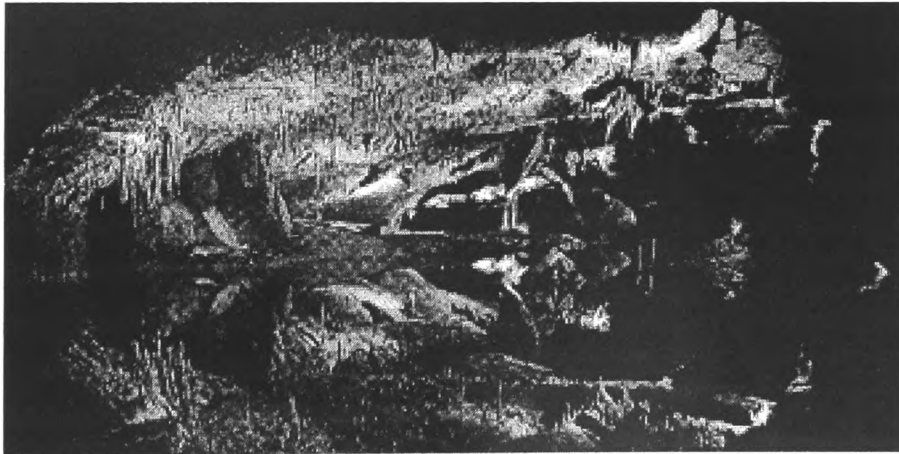
Particularly germane to our inquiry is the fact that most aesthetic theories argue that art is not a matter of simple embellishment considering its divers appeals to the various cognitive faculties of the eye/mind complex. The critical capacity of art is that it advances conjoined expectations along with cultivated appraisals through discriminating semi-withdrawal. So considered, assumptions concerning ideal immersive sacred zones (and their distinguished semi-removed status) (Eliade, 1959) in regard to immersively spawned states of *gesamt* aesthetic consciousness will be addressed historically in this section, as it is common for ideal sacred zones to supply acute information on the human race's apparently insatiable desire for transcendence through immersive aesthetics. In this respect Georges Bataille argued that the sacred springs from the same sources as those things we conventionally find repugnant, such as ritual sacrifice and bodily mutilation, and that within sacred zones sublime non-linear interconnected transmissions are meant to transpire, thus provoking attachments between the cavernous unconscious mind and its conscious active compartment. (Bataille, 1988) The marvellous abstract character of such supposed sublime transmissions (which formed earlier world-views through their use of cavernously shaped immersive sites) and their effect on immersive states of consciousness will be explored in this section. But to begin to do so we must keep in mind that all reputed sacred propositions occur within configuring theories of culture. All that we apprehend as sacredly significant resides in cultural symbol, which, as we have discussed, is the gist of art. (Langer, 1953) It is exclusively by our encounters with theories of culture that we style omitted or grasp upheld sacred abstractions. (Burckhardt)

In response to my attempt to grasp the theoretical basis of prehistoric sacred space, on May 5th, 1997 John P. McCarthy, research fellow at the Institute for Archaeology, replied to my questioning concerning the epistemological nature of archaeological theories as opposed to art theories which I had posted on the *theory@mailbase.ac.uk* list, by explaining that archaeology is the study of mankind through material remains, and as such is a parent of art history. Archaeology is one, of several, sets of methods used by

scholars to study aspects of the past whose substance might more accurately be described as relating to history, anthropology, technology, or art history. Although the discipline today sees itself as an exact science and demands laboratories and funding to suit, its academic origins are similar to those of art history. The disciplines of art history and archaeology are especially intermingled in those periods for which records are sparse or missing, such as the one we shall investigate now. What separates them is the greater admixture of theory which archaeologists must apply to make patterns and sense out of their material. While there are no agreed criteria for assessing theories developed from archaeological data, data must exist to support the theory and the interpretations offered must make reasonable use of the data and archaeological theory.

With this in mind, we shall now turn our attention to what I perceive as the genesis of immersive aesthetic space: the adorned prehistoric cave. We shall approach the resplendent prehistoric cave by keeping in mind that, according to Marshall McLuhan, form determines the action of mediation which determines meaning. (McLuhan, 1964)

Caves do not occur in every sort of rock but are most often discovered in limestone, having been produced over millions of years by the washing away activity of subterranean rivers. The *American Heritage Dictionary of the English Language* tells us that the word *cave* stems from the Latin root *cavus* which means *hollow* and that the cave is an aperture in the earth, ordinarily attenuated horizontally, although it may also go underneath and within. As such, a cave is cimmerian and so to set foot in it is to encounter our complex and fascinating supernatural fringes, our dreads, and the ominous areas of our feelings towards the sacred. (Kierkegaard, 1946)



an unpainted cave in Haut Quercy, France

A prehistoric *painted cave* is all that, moreover enhanced through the emotional defamiliarisational powers of art. Over 200 late-Stone Age caves bearing wall paintings, engravings, bas-relief decorations and sculptures have been found in south-western Europe alone. (Ucko & Rosenfeld) Life, in the form of tiny blue algae, emerged on earth 2 billion years ago, or what is called *BP* (Before Present). The first people who made tools,

the basis of technology, were the Homo Habilis, a people who lived in Africa 2 million years ago. People have inhabited the Périgord region of France for about 200,000 years and indeed the cave at Lascaux was discovered by Cro-Magnon people (Homo Sapiens with large frontal-lobes who migrated from the Middle East) about 17,000 BP. (De Beaune) At first their art consisted of intimate body decoration (such as beads, bracelets, pendants and necklaces) and more will be said on this aspect of the immersive perspicacious mind following the discussion on aesthetic cave space.

Gradually during the Gravettian Period (approximately 20,000 to 25,000 years ago) people began to embellish the walls and ceilings of a few small shallow caves (Laussel, Oreille d'Enfer, and the Pair-non-Pair cave in Gironde are good examples). (Delluc & Delluc) Subsequently, prehistoric painted caves became the sites of the humans' first topographical imagings; images which celebrated mortal terror and love of the animal and its world, as well as the passionate and jubilant triumph over that terror/love through the organised hunt and the strategic, co-ordinated, co-operative group adhesion which the hunt necessitated.

However it is important to remember at all times that the animals depicted in the caves were not generally those animals which were hunted and eaten. The Magdalenian people hunted and ate primarily reindeer and a reindeer is only represented once in the cave of Lascaux out of over 2,100 legible images; in the Apse. (Delluc & Delluc, p. 46) The significance of this will be pondered and discussed shortly. But at the outset we can surmise that the animals represented here were depicted in order to serve as spiritual intermediaries or as ideal aspirations. In the terms of Bohm/Pribram's homogeneous, holographic, space/time matrix, the Magdalenians' depicted events can be interpreted as disassociated (in their lack of depicting context) and conflicting (in their superimpositionality) while being immersed underneath at the implicate frequency level (in the Bohm/Pribram understanding) as these scenes depict all things and events as ultimately intangible and connected into one total singularity. It is for this reason that the prehistoric painted cave must be addressed as a place of active immersive cognisance and not as a mere receptacle of discrete utilitarian (magical) images in service of the hunt in any simplistic one-to-one fashion; though some sort of indirect connection to their hunting culture is hard to repudiate, especially after the discovery in Lascaux of a large number of broken spearheads, all of which were engraved, often with a double interlocked herring bone pattern and a star with six rays. (Delluc & Delluc, p. 57)

Most prehistorians agree that visual communications came into being somewhere around 40,000 years ago, about the time when Cro-Magnons reached Ice Age Europe and began decorating their tools and bodies with symbols. Living in small groups, they constructed tents from skins and huts from branches, however (evidently) they possessed an incredible yearning for deep immersive experiences within the dark places of caves. Thus in the caves they embellished it is possible to see an immersive presentation in a collective space, a space which was not the property of any individual. This expansion from the decoration of the body

to the cave is in itself an extraordinary act of immersive intelligence. The period between the invention of drawing, when animal forms and human genitals were engraved in rock 35,000 to 40,000 years ago by the Cro-Magnon on the banks of the Vézère, and the creation of Lascaux, is as long as the period of time which separates us from the civilisation of Lascaux. As much time elapsed between the first ornamental body and the cave paintings of Lascaux (about 17 millennia) as separates Lascaux from the first TV broadcasts. Nevertheless, Stacey Spiegel sees the Lascaux cave as being "the first *total art*" (Hoekendijk, p. 21) and Rheingold speaks of Lascaux as the first virtual reality. (Rheingold, pp. 379-382)

The physical and psychic risks involved in such a seemingly non-essential activity as painting inside a cave indicates that it was done, and indeed savoured, for some antediluvian reason, perhaps sacred, deemed essential enough to fashion an immersive space where human consciousness could plunge into extraordinary immersive experiences. The real threat implicit in the dangerous passage that must be made to enter a painted cave, with its usual remoteness from human habitation, suggests that these are sites of ritualistic loss and re-finding typical of intense love and tragedy. Thus the entrance into an immersive cave is always a movement towards self-interiority. To enter a cave is to move into it, and as such, initially involves a directedness away from the periphery and toward depth, toward density, and away from dispersion.

What frightens humans most about entering a dark cave is death. But as Monica Sjoö and Barbara Mor assert, such an entrance is also a sacred/sexual excursion into the fertile womb. (Sjoö & Mor, pp. 71-76) Indeed for the distinguished prehistoric expert André Leroi-Gourhan (1911-1986), a painted prehistoric cave (specifically Lascaux) was symbolic of the sex of the female. (Ruspoli, p. 81) And according to Camille Paglia, *the female vagina is the prototype of all sacred spaces*. (Paglia)

Thus far away from the light of the sun and stars, far from the daylight world of accustomed life, prehistoric people must have entered the depths of the immersive darkness of a cave to contemplate both the beginning and end of their life. Indeed the cave's lack of light is an insubstantial force whose intensity around the immersant must be carefully considered. The first occurrence we must contemplate in this regard is the dilation of the eye's pupil as entree to a dim cave is achieved. Noticeable is that in terms of vision and light and sex, the pupil's dilation indicates sexual attraction and facilitates it. (Kinsey, p. 615)

Salient here is that the retina registers a field of 160 million points of light. The remarkable richness of natural light is due to the fact that it is a unification of focused and diffused light. Issues of light are issues of clarity and obscurity, issues which constantly vie with one another with an exacting power. The sun, which is roughly 57 million kilometres (about 93 million miles) from the earth, functions as the source of all light of course, but we must recollect that its effects are invariably qualified to a greater or lesser degree by the earth's atmospheric envelope through which the light must penetrate. The regular waxing and waning of light is

often dramatically altered in its character and intensity by the apparent vicissitudes of changing atmospheric conditions. In order to realise how essential this combination of direct and diffused light is to our sense of well-being, one need only recall the deadening aftermath of a heavy overcast day when the whole world seems to be enshrouded in a pervasive melancholy.

The early-Upper Paleolithic period (beginning about 45,000 to 38,000 years ago and ending around 10,000) saw significant innovation in stone tool technology and weapon systems by the early members of our species. (De Beaune) Their invention of sharpened flint blades made the creation of most all of their art possible, via carving and engraving. In painterly terms, the principal techniques of Cro-Magnon art involved brushes made of vegetable fiber or animal hair, tufts of fur, and the use of fingers; along with a blowing of pigment dissolved in saliva onto the wall. (Delluc & Delluc, p. 57) The European predecessors to the Cro-Magnons were the strapping Neanderthals who successfully occupied Western Eurasia from about 200,000 BP up until they were superseded by the Cro-Magnons, sometime around 40,000 BP. Neanderthal culture, known as Mousterian, shows scant inklings of visual representation, however there are traces of immersive symbolism in their burial sites as the corpses were surrounded by pebbles and bones with fragmentary patterns scratched onto them. (Powell) Sometime after 40,000 years ago, at a time when the remaining Neanderthals shared the European landscape with the first Cro-Magnons, there was a relative explosion of ornament and graphic imagery among the earliest Cro-Magnons.

By the Upper Paleolithic period, *Homo Sapiens* had firmly established their existence based on hunting, fishing and the gathering of plants. In terms of art, the Cro-Magnons left behind dozens of sculpted ivory animals, moulded and fired clay statuettes, hundreds of engraved images on limestone blocks and cave walls, thousands of scrupulously decorated personal body ornaments consisting of ivory, shell, soapstone and animal teeth (Speitz), along with the numerous and widely distributed female (so-called Venus) figurines. The earliest substantial body of surviving material relating to human sexual culture is the art of the Eurasian Upper Paleolithic, including its paintings of half-bestial males with erections, rock-cut vulvas, carved phallic batons, and the previously mentioned super-endowed nude Venus female figurines. (De Beaune) These sculptural miniature statuettes of extraordinarily big-breasted human females are understood as contemplations on sex and fecundity and (if one follows my previous point concerning the infant's rapport with the voluminous breast) a longing for oceanic unity and totality. The Venus figurines are entirely in the round and unconstrained from any physical site, thus hand-holdable and portable. Wonderful examples are the ivory *Vénus de Lespuge* from Lespuge, France (circa 27,000 BC) and the eyeless and bulbous stone Venus of Willendorf (circa 30,000 BC) which was found in Austria.

Evidently there was adequate time for sexual/spiritual/artistic acumen in the hunter-gatherer society, as case studies from various parts of the world show that sufficient food can be obtained with an average adult

hunting, fishing and gathering (in common cause with others) in only three to five hours per day (Rudgley), less than people generally work now in our (so-called) advanced Western civilisation. The leisure time of many hunter-gatherers seems to have been abundant, affording adequate time for the fashioning of the immersive artistic/spiritual cave spaces which concern us here. Indeed André Leroi-Gourhan in his book *The Dawn of European Art: An Introduction to Paleolithic Cave Painting* maintains that the generations of artists who executed Lascaux were very probably released from even this minimum burden of daily work by other members of the group. (Leroi-Gourhan, 1982)

The earliest modern unearthing of a significantly painted cave occurred in 1879 at Altamira in the region of Santander in northern Spain. (Lawson) The credit for the recognition of Paleolithic cave art must go to Don Marcelino Sanz de Sautuola, a landowner who lived near Torrelavega in northern Spain, and his young daughter Maria. Earlier reports of embellished caves had been made, but it had not been recognised for what it was, nor were the discoveries publicised. The cave of Altamira (near Santillana del Mar) had been discovered in 1868 and was first visited by Sautuola in 1876. During this first visit he saw on the cave walls only a large number of repeated black lines, but in 1879 a second visit to Altamira (this time accompanied by his nine year old daughter Maria) resulted in the discovery of an enormous painted ceiling.

Throughout Europe to Siberia when anthropological remnants are discovered most often they are detected just in and about caves, the inaugural human abode. Cave mouths give considerable amounts of information concerning our prehistoric ancestors and in them we encounter evidence of what prehistoric humans ate, what tools they created, and how their dead were buried. We can state with relative certainty that cave mouths offered a position of protection from inclement conditions, of course, and that they provided discrete positions of observation. (Ruspoli, p. 80) While Sautuola excavated for artefacts just inside the cave entrance, his daughter wandered off to play deeper in the cave and looking upwards saw the now celebrated painted ceiling. (Lawson) The graphic ochre and black paintings of bison on the naturally swelling ceiling of the cave were only the most spectacular of the many paintings in the once innocuous cave. Soon afterwards Sautuola published a paper on the find in which he stated his conviction that the paintings were prehistoric. After initial interest from the authorities, his claims were rejected however and it was even suggested that the paintings were forged. However from 1895 onwards, other painted caves were discovered in France and these discoveries altered the views of the critics. (Ucko & Rosenfeld) As the authenticity of the art became accepted, a deliberate search for further caves was made. Consequently many impressive caves came to light in both France and Spain: Bernifal (1903), Teyjat (1903), La Calevie (1903), Cap Blanc (1909), El Castillo (1903), Homos de la Peiia (1903), Covalanas (1903), LaLoja (1908), La Pasiega (1911), Gargas (1904), Niaux (1906), Le Portel (1908), Le Tuc d'Audoubert (1912) and Les Trois Frères (1914). (Lawson)

Later in the century decorated caves continued to be found with the notable discoveries of Lascaux (1940), Le Gabillou (1940), Cougnac (1952), Las Monedas (1952), Las Chimeneas (1953), and Rouffignac (1956). Impressive more recent discoveries have been made in Spain including Altxerri (1962), Tito Bustillo (1968), Ekain (1969), Cueva del Nifios (1970), Zubialde (1990), and as recently as December 25, 1994, near the village of Vallon-Pont-d'Arc in the Ardeche Valley of south-eastern France, Jean-Marie Chauvet, a guard with the Regional Archaeological Service, assisted by two volunteers, Eliette Brunel-Deschamps and Christian Hilaire, uncovered the hidden entrance to a vast underground network of caves, some decorated with paintings and engravings dating from the Paleolithic including the painted Cro-Magnon cavern now called the *Grotte Chauvet*. The prehistoric dates recently obtained for the paintings of the Grotte Chauvet have focused new attention on the cultural developments of early Upper Paleolithic, the 20,000 or so years between the first traces of symbolic representation (circa 40,000 BP) and the painting of Lascaux (circa 17,500 BP). This long stretch of cultural evolution comprised of two archaeological cultures: the Aurignacian (40,000-28,000 BP) and the Gravettian (28,000-22,000 BP).

Another recently discovered painted cave is Cosquer in the south of France which can be reached only by scuba divers as its entrance now lies below the surface of the Mediterranean. This is so because in the Upper Paleolithic period (from 70,000 BP to 10,000 BP) so much of Europe's water was locked up in glaciers that the sea-level was some 90 metres (300 feet) lower than it is today. The art under discussion was contemporary to the epoch between 35,000 BC and 10,000 BC, the Late-Pleistocene period. (Lawson) Even as this sounds exceptionally old, it must be remembered that we know from radiometrically dated strata in Africa that primitive forms of man had been making stone tools for more than 2 million years. (Chaudhuri)

Although Paleolithic cave art is often discovered deep inside caves quite remote from the cave entrance, it is a mistake to suppose that Upper Paleolithic human communities usually lived in such dark, and inherently hazardous, sites. Customarily they lived in the open air, enjoying the sun and breeze, under skin tents or in the mouths of caves or beneath rock overhangs where they could find refuge from the elements but have the benefit of daylight. (De Beaune) The inaccessibility of the painted chambers and the lack of detected debris therein suggests that deep caves were penetrated only occasionally. Nobody lived in the painted areas of the cave, as analyses of painted caves' contents have yielded no signs of human habitation beyond the traces of animal-fat lamps and torches used by brief visitors, and some mounds of pigmented-earth left behind. These painted caves were presumably meant to be seen by few human beings under conditions of extreme difficulty and apprehension, as many are entered only by crawling on the belly through a hole in the earth down into dark passages in the earth's womb. These are the archaic conditions that, one may surmise, produced an array of immersive ideals connected to sex and death which became deeply implanted in human immersive instincts and which subsequently became assimilated into Pre-Classical culture (such as the narrative of the mythical Cretan labyrinth in whose belly the deadly Minotaur resided).

Bearing in mind the threat implicit in the hazardous passage that must be made by prehistoric people on entering a painted cave (potentially inhabited by massive carnivores), its remoteness from human habitat, and the expressiveness of the transparently stacked images placed there, I shall suggest that these painted immersive spaces were sites of hypothetical trans-presence. Removed from the illumination of the sun, moon and stars, removed from the daylight realm of accustomed existence, early humans entered into the painted cave's dimness (consequently with maximised retinal dilation) as if returning to the sacred dilated female source of themselves; and simultaneously, to a place of anxious potentiality.

BII: The Necessity of Passage-Fear Receptivity

Whatever is fitted in any sort to excite the ideas of pain, and danger, that is to say, whatever is in any sort terrible, or is conversant about terrible objects, or operates in a manner analogous to terror, is a source of the sublime; that is, it is productive of the strongest emotion which the mind is capable of feeling.

-Edmund Burke, *A Philosophical Enquiry into the Origin of Our Ideas of the Sublime and Beautiful*

In Spain honor is a very real thing. Called pundonor, it means honor, probity, courage, self-respect and pride in one word.

-Ernest Hemingway, *Death in the Afternoon*

The social function of art within the early formative epoch of human history necessitated, and necessitates, a shared conception of a larger amiable whole, thus the basis of human love and reproduction. (Freud, 1958) With art, people are fastened together by aesthetics into a free-flowing compound-total in the interests of their improved survival, pleasure and replication. As stated, prehistoric art has been discovered at various points inside of passages, in niches, and sometimes near cave mouths; but it is in the cave, generally deep within, where prehistoric immersive art attained maximum intensity with its field-of-view encompassing painted murals. These murals will set the precedent for immersive art's penchant for constructing overall aesthetic enveloping hyper-totalities which appear continuous by way of their exceeding the normal FOV with visual interest.

At first glance many of the most lavishly adorned murals seem like a chaos of lines and colours. Animals of miscellaneous species emerge at disparate scales and in divergent colours. Also they are oriented in various directions, even vertically or upside down, some complete, others without heads or extremities. Many are superimposed and thus appear transparent and ephemeral. At some caves, such as Tito Bustillo, though different phases of painting are evident, a corresponding style is used throughout lending it a stylistic consistency typical of the gesamtkunstwerk.

The vast bulk of the remarkably embellished chambers in deep, dark, isolated areas date from the centuries approximately 15,000 BP, the conclusive (but prolonged) phase of the Ice Age. Commonly the walls, which warp and bend overhead (wrapping the immersant in an enveloping total space) are painted and occasionally the floor is put to use also. Always the most immersive salons contain paintings on the walls and, importantly, the ceilings, such as at Altamira, Lascaux and Rouffignac. At Altamira there are sections of the painted salon only little more than one metre (3.28 feet) high, assuring a compressed close-up immersive experience. At the Homos de la Pefiahe cave the immersant must lay on his or her back and slither into low hollows to behold drawings. (Lawson)

With prehistoric painted caves, people penetrated deeply into the womb of dark caves to paint and scratch transparent images of untamed animals on every surface of the roughly rounded space, including the floor. As a consequence we have come to appreciate the sophistication of the omni-spatial perceptual dynamism which this immersive art utilises in the transformation of consciousness at a period in time far earlier than the first written words. Hence a feeling for and knowledge of the cave art of Western Europe is essential to a mature awareness of immersive aesthetics even though it is conceivable that the majority of readers will not have entered any painted caves, as I have had the privilege of doing. However, as is also the case with VR, a personal, experiential understanding of the spatial properties of embellished caves is essential to the development of a comprehensive immersive theory, as their enfolding shape and enclosed feel is indispensable to the power of the art. Sadly, these are features which are impossible to convey through flat rectilinear photos.

The 2 kilometre (1.24 mile) long *Niaux* cave system in the French Pyrenees, 5 kilometres (3.1 miles) southwest of Tarascon-sur-Ariège in the department of Midi-Pyrénées in central/southern France (officially discovered by Emile Cartailhac in 1906) is a good place to start on-site explorations as this ashen limestone painted cave is owned by the French State and accessible to the public. There is no electrical lighting system within and if it were not for the torches provided by the guide the immersant is in absolute darkness and silence with the exception of faint, reverberating, promiscuous drippings. The ambience is dankly cool, as the cave maintains itself at a habitual temperature of 12°C which markedly contrasts with the tepid air and fervent sunlight left outside. Stagnant water, like a pestiferous dark reflecting pool, covers most of the 50 metre long (164 foot) floor of the first antechamber, which is nearly 30 metres wide (98.4 feet). This chamber leads upward into a high-vaulted, sparsely stalagmited, corridor.

One must proceed nimbly and with care as not to skid on the slimy floor which has been coated by calcite. Pools of tranquil water hinder the path from time to time. There are 700 metres (2,296 feet) between the entrance and the first major change of direction of the long cave yet the only human markings of the walls are relatively contemporary graffiti, some dating from the Baroque. Deeper inside, some 450 representations await discovery within a complex of chambers, the most celebrated being the *Salon Noir* (Black Salon). This deep chamber is unforgettable because of the distance of the Salon Noir from the cave's entrance. The entry to the Salon Noir is signalled by a smooth stone surface only 1.5 metres high (4.9 feet) from the floor which is scattered with maroon and ebony blots of colouring. Beyond that point three walls 15 by 20 metres (4.9 by 65.6 feet) are scattered with bestial drawings rendered with jet black contour lines. Moreover, horses, bison and ibex have been etched into the floor at the closure of the space. The subtlety of the 14,000 year old accomplishment is astonishing. For example in 1974 two engraved bison and an arrow-like sign were detected in a small alcove on the right-hand wall of the Salon Noir despite repeated detailed surveys which

began in 1906. (Lawson) The stupendous richness of the paintings and etchings of this chamber construct one of the most spectacular achievements in archaic environmental immersive creation.

In one sense the Salon Noir is typical of the prehistoric immersive arrangement in that, like most painted caverns, it is entered only after a prolonged and precarious trip, bypassing far more accessible spaces. This journey of course takes committed time; up to as much as three hours at Montespan. Through the moist darkness prehistoric people passed through unfamiliar spaces (there are no signs of frequent engagement) so as to produce and experience immersive art, even requiring passageway through subterranean lakes at some sites. Also we must remember that caves provided asylum for fierce human predators such as the great prehistoric cave bears, lions, and panthers. (Ruspoli, p. 82) Clearly their presence was a dominant factor when we consider that Grotte Chauvet, for example, was found to harbour the remains of around 100 bears. Indeed, certain bear skulls were repositioned to privileged locations in the cave, in one case onto a rock in the centre of a circular hall.

Verily such creatures were puissant foes to be feared and assuaged by primordial people and in this sense caves were not solely sanctuary spaces but also exploratory spaces of fear and sacred trepidation. Indeed Bataille says that the painted cave of Lascaux, for example, was a "place of anguish" and "religious horror". (Bataille, 1979, p. 46) The death risk involved in penetrating many of these openings is attested to by the cave bear-tracks which have been left in the mud floors and along tight trestles. As the risk of death was real, by passing through the mouth of a cave into its admissible swell, the immersant encountered (via dilated retinas) a wide FOV artistic phenomenon both sacred and fearful through the prismatic intensity of an adrenaline driven consciousness. Certainly the potential risk encountered, which prehistoric people assumed by traversing such labyrinthine passages, must have been palpable in its production of enzymes. One assumes a *highly emotionally engaging level of alert immersive consciousness* was experienced.

Rachel Levy in her book *Religious Conceptions of the Stone Age and Their Influence on European Thought* maintains that such immersive Paleolithic cave feelings have become encoded into subsequent archetypes of beliefs which persist in contouring Euro-American thought and which now, I surmise, continue to move in our regimented grooves of sensibility. (Levy, R.) If I may conjecture here, perhaps this *attainment of such a super-adrenalinised cognisant sensation was the point* of the venture, its objective and *raison d'être*, and as such necessitated the descent into the frightful deep pit so as to prepare a super-conscious arrival into the adorned chambers rich with depictions of intricately wafting, disembodied forms. Thus the opulently painted cavern is a *site of super-conscious transporting capacity*.

Hence prehistoric caves were places in which *consciousness became self-consciously expanded into a larger field of virtuality*. This seems well illustrated by the image-shower found in the *Grotte de Lascaux* with its marks of animal transit intermingled with a sense of death and fertility.

BIII: The Grotte de Lascaux's Sacred Libido

Lascaux is the passage from the work world to the play world, which is the passage from the Homo Faber to the Homo Sapien.

-Georges Bataille, *Lascaux: La Naissance de l'Art*

Any serious exploration of phantasmagoric phenomena presupposes a dialectical intertwinement to which a romantic turn of mind is impervious.

-Walter Benjamin, *Reflections*

The eruption of lived pleasure is such that in losing myself I find myself; forgetting that I exist, I realise myself. Consciousness of immediate experience lies in this oscillation....

-Raoul Vaneigem, *The Revolution of Everyday Life*

The most widely known, and arguably the most splendid (looped, as it is in places with dynamic feral sashes which wind and twist imposingly over its intricate interior shape), is the Grotte de Lascaux (carbon dated circa 17,000 BP) located atop an ancient headland in the Périgord, France, which I attained the uncommon privilege of visiting.

As Georges Bataille says, we cannot know the full meaning of Lascaux but we can "sense its maker's desire to impress by stunning our senses". (Bataille, 1979, p. 37) And indeed in coming into the immersive space of Lascaux my first impression was of being stunned and disconnected from the norm in favour of a psychic space where sex, art, and death meet in an aesthetic discharge.

Lascaux cave was discovered on the 12th of September in 1940 by four local children and a dog and shortly thereafter was thought, by some, to have had served magical imaging functions deemed useful in rousing the psyche in preparation for the hunt. (Breuil) In relationship to immersive consciousness, it is necessary to survey what we can ascertain today (given our highly culture-bound predilections) of visualisation practices which, it is surmised, were utilised in accord with the prolifically decorated galleries of Lascaux. (Lewis-Williams & Dowson, 1988) We can hypothesise that an ability to visually fashion that which is non-visual (or not yet in existence) by allowing unexpected configurations optically to emerge is essential to life; then as now. This symbolic concentration is a sort of idealised schematisation which can be further characterised as a product of *a priori* imagination through which ideas and actions become imaginable. And truly the creative act of visualisation is immediately obvious on entering Lascaux's initial salon, as the painters of Lascaux took into full consideration the environmental characteristics and qualities of the physical cavern, first by utilising both the encasing ceiling and walls, and then by using the physical bulges and bosses of the stone enclosure to meat out the forms of the animals' rumps and bellies.

The painters, evidently, wished to create a total aesthetic ambience which would convey the all-over presence of animals in close proximity to the human visitor (and to each other) as the depicted beasts merge into each

other with no respect for the relative size of the different species and with no obvious connection outside of their splendid over-all compositional ornateness. This particular voluptuously painted cave is the most superbly adorned of the prehistoric caves, festooned as it is in a wrap-around overhead garland of overpowering bestiality, with even its ceiling painted (with the use of temporary wooden scaffolding). It is not the oldest (some of the paintings in Chauvet cave are over 30,000 years old, 3,000 years older than the oldest cave paintings previously known and nearly twice as old as those found at Lascaux) nor the largest prehistoric cave, but simply the most artistically achieved and thus the most alluring, from our point of view, as in Lascaux most upper-walls and ceilings are resplendently surfaced with sumptuous immersive paintings which depict the quivering apparitions of semi-transparent animals. Mario Ruspoli characterised these paintings as depicting the "spirits of divine animals". (Ruspoli, p. 81) Furthermore, with the *Rotunda Salle des Taureaux* (Bull's Chamber), Lascaux holds the distinction of housing the most colossal Paleolithic frieze (with the largest painted figures) known to us and this fact alone merits our rapt immersive attention. One of the Bulls which festoons the cloud-like Rotunda frieze is almost 5.4 metres (18 feet) in length. Others in the same gallery are 3 metres (10 feet), 3.6 metres (12 feet), and 4.2 metres (14 feet) in length, whereas the largest figures at Altamira are only 2.1 metres (7 feet) long and those at Niaux average about .9 metre (3 feet) in length. (Leroi-Gourhan, 1968)

Verily the leitmotiv of the cave is huge groupings of horses in and around large semi-transparent dominating bulls. But what is particularly noteworthy is that this tangle of animal forms exists in a groundless (virtual) atmosphere where the bodies are not anchored to anything suggesting land. Rather, what is suggested is a 360° non-Euclidean space, which as we have seen, is precisely the arrangement of the ideal range of virtuality in Virtual Reality. There is no attempt at depicting non-virtual Euclidean ground or defining a landscape, and there are no plants, trees or rocks depicted. Moreover the dominating figures here are not simply bulls, but rather bull-apparitions, hung with and interposed by a dainty petticoat made up of smaller animals (stags, horses and bison) all organised in crescents and cruseiforms in and around them in interpenetrating and profuse fashion. Furthermore the mural in the Salle des Taureaux struck me as aesthetically deluxe in its capacity to evoke intelligence through the management of line and its unification of the semi-sculptural with the graphic.



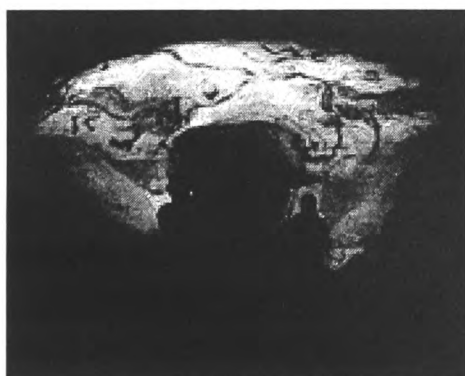
Salle des Taureaux

In that the walls of the cavern have been coated with crystallised calcite due to flooding long long ago, the paintings glimmer with a subtle sparkle which is enchanting to the eye, a bit like what in VR is called *scintillation*: the sparkling of rendered textures (usually undesirable when pursuing photo-realistic effects). Thankfully the congealed calcite served as well as a protective sealing and safeguarding varnish-coat which has kept the painting's colour looking remarkably fresh and well preserved. This glimmering effect was heightened further when my Ministère de la Culture guide dowsed all the electrical lights (designed to reproduce the tallow lamp originals which burned animal fat with Juniper wicks) and lit a cigarette lighter to better convey an idea of the original visual effect of tallow and burning wicks which provided an unsteady twinkling light (as a candle flame does). At that point the calcite twinkle burst into a full-blown flicker.

More than one hundred burned tallow lamps were discovered inside of Lascaux (Delluc & Delluc, p. 47) and even if they were all in use at the same time, which is unlikely, one must visualise how faintly dim the light is inside the cave, and how lovely a warmly soft, etiolate-fat incandescence illuminated its walls, and how this flaxen dimness suggests to the mind a semi-dream state, reminiscent, for me, of how invariably exciting it is to go to sleep in an unaccustomed bedroom where the unfamiliar wallpaper and pictures, faultily grasped in the obscurity of night, are only faintly perceptible and thus open to imaginative interpretations. (Eco, 1989)

What is significant to this study is the psychic effects produced by the dim seductiveness of the cave's friezes. What I felt when caught up in the supernatural ambience of the space, due to the dim glint of the calcite, the smell of the dank earth, the slightly overhead majestic size and sense of transparent movement of the wrap-around painted beasts which were strewn throughout, was a sense of deliriously (and vicariously) identifying with them, even as they burst over the edges of my visual cone without restraint, and of euphorically running among them as a half-horse/half-man silene (centaur); that jocular classical Greek woodland spirit similar to satyrs (who were half-goat/half-man). This totemistic state of consciousness (Mithen, pp. 165-167) is what Dr. Lilly calls "species-jumping-thinking". (Lilly, 1974, p. 40) Deleuze/Guattari's term for experiences of this nature is "becoming-animal". For them to "become animal is to participate in movement, to stake out the path of escape in all its positivity, to cross a threshold, to reach a continuum of intensities where all forms come undone, as do all the significations, signifiers, and signifieds, to the benefit of an unformed matter of deterritorialized flux, of nonsignifying signs". (Deleuze & Guattari, 1986a, p. 13) Along with this experience of feeling intricated in a becoming-animal "panorama" (Deleuze & Guattari, 1986a, p. 36) by self fashioning a "map of intensities" (Deleuze & Guattari, 1986a, p. 36) I felt enveloped and tangled inside a sensation of sacred/sexual omnijective passion as the fertile abundance of animal spirits covered and absorbed me in a generalized sense of fertility (a fertility which would help ensure the success of any hunt through a plenitude/excess of the hunted).

This silene sensitivity was particularly acute in the Axial gallery, the gallery which follows the vast Bull's Chamber, as here the cavern tapers to form a more compressed overhead ceiling display. Here one finds a tremendous stag 1.38 metres high (4.6 feet) with an enormous rack of entangled antlers flanked by three horses and an abstract door-like form and rows of dots. Particularly here I had this feeling of being included in omnijective frolicsome animality. A sense of tragedy was conveyed there too though by an apparently wounded and fallen horse which concluded the gallery. This pitiable image, mixed with the rest, made me think of Earnest Hemingway's (1899-1961) textbook on bullfighting and its history (*Death in the Afternoon*) as it concerned the function of tragedy in the ritual of the bullfight, as the bullfight too consists of a deathly dangerous inter-connective rapport between men and horses and bulls. (Hemingway, pp. 5-14) Even though Hemingway identifies the tragic aspect of the bullfight as that emotional space located between the bull and the man (a horse's gored death by the bull, in his terms, is comic-tragedy) the important part is that the tragedy of death is necessary in order to convey the feeling of life and death to the cave and hence its sense of *mortality dissolving into transparent immortality*. Soon, however, my frail humanity gratified me and I felt very remote indeed from the tragic animality of my surroundings, almost as if I were a miniature silene carved out of silver and ivory. As I slipped out of the previously keen feral feeling, I felt the flagrant beasts, by contrast, running over me and exploding me; along with a hundred other things.



Axial Gallery

Lascaux's friezes, I must assume, had similar psychic/symbolic omnijective meaning to those who rendered them and looked upon them, and that they supplied a framework in which an expanded immersive consciousness could be expressed sociably. As we saw in Section A with the Bohm/Pribram understanding of omnijective existence, expanded immersive consciousness is present in various degrees of enfoldments and unfoldments and dividing space up into ostensibly exterior and interior distance has no real significance.

One thing that is unusual about Lascaux is that access to its galleries are far easier than in most other caves (such as at Niaux) with the exception of the gallery called *The Chamber of Felines*, which I was not

permitted to see due to its remoteness deep within the cave. As previously established, the majority of entrances to prehistoric caves are far from the painted "inner sanctuaries" (Leroi-Gourhan, 1968, p. 163) and require an eventfully hazardous journey which heightens the emotional intensity. Those that are not difficult to reach physically, like Lascaux, start their gallery/sanctuary at the point where light diminishes, creating a transitional emotional and dilational retinal passage adjustment in preparation for a sacred experience (according to Leroi-Gourhan). (Ruspoli, p. 80)

The other gallery inaccessible to me was the *Shaft* or *Pit* which was considered too difficult and dangerous to visit. The Shaft is a 6 metre (20 foot) deep hole, just wide enough for one person to fit in comfortably, halfway along the Passageway toward the Chamber of Felines. It contains the famous scene of the wounded bison who is literally spilling his guts and the bird-headed reclining man with an erection (the sole human-narrative scene in Lascaux). (Delluc & Delluc) I was not allowed to see this however. Nevertheless just prior to the Shaft/Pit is the *Abside* (Apse), a roundish, semi-spherical, penumbra-like chamber (like those adjacent to romanesque basiliques) approximately 4.5 metres in diameter (about 5 yards) covered on every wall surface (including the ceiling) with thousands of entangled, overlapping, engraved drawings (Leroi-Gourhan, 1968, p. 315) for which on request I received an additional unique privilege of seeing, though far too briefly.

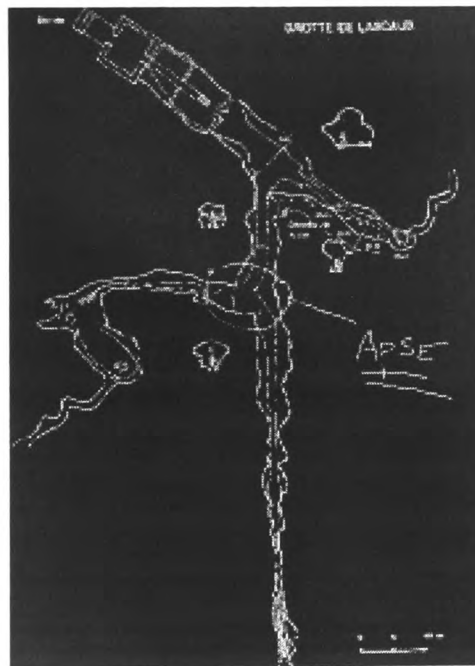


diagram of Lascaux



detail from the *Abside*

The ceiling of the Apse (which ranges from 1.6 up to 2.7 metres high (about 5.2 to 8.9 feet) as measured from the original floor height) is so completely and richly bedecked with such engravings that it indicates that the prehistoric people who executed them first constructed a scaffold to do so. (Ruspoli, pp. 146-147) This indicates to me that the Apse was an important and sacred part of the cave and indeed Ruspoli calls it the "strongest, most richly symbolic, most mysterious and most sacred" of all the inner spaces which make up Lascaux. (Ruspoli, p. 146)

Generally the Apse however has been ignored by art theoreticians (and there is only one widely published scholarly investigation of it per se, by Denis Vialou in Arlette Leroi-Gourhan's *Lascaux Inconnu* even though Abbé Glory spent several years trying to decipher this inextricable chamber) as nowhere is the eye permitted to linger over any detail (even though it holds an immense 2.5 metre engraving (8.2 foot) in its midst). Rather, the gaze is urged on by an all-inclusive flood of sublimated optic information in need of visual stamina. Nevertheless, the Apse holds a semi-legible "comprehensive index" of all of the forms of representation found scattered throughout the entire cave, thus making up what Mario Ruspoli calls Lascaux's "véritable corpus" (real body). (Ruspoli, p. 147) My appraisal, though, is that it is Lascaux's veritable brain and conceptual centre.

Of it, Bataille said that it was one of the most remarkable chambers in the cave but that one is ultimately "disappointed" by it. (Bataille, 1979, pp. 58-59) I was not disappointed however. Indeed, what pleased and fascinated me about the Apse was exactly its cryptic and foreboding over-all hyper-totalising iconographic character granted by its boundless, palimpsestic, wall-paper-like image explosion (what Bataille called its *fouillis*) of overlapping near non-photo-reproducible stockpiled drawings from which, when sustained visual attention is maintained, unexpected configurations visually emerge. Here animals are superimposed in chaotic discourse, some fully and carefully rendered, others unfulfilled and left open to penetration by the environment, all commingled with an "extraordinary confused jumble" (Leroi-Gourhan, 1968, p. 315) of lines including, remarkably, the sole claviform sign in the Périgord and, even more remarkably, Lascaux's only reindeer, an animal which existed in plenitude during the period of the adornment of Lascaux. Its extensive

use of superimposed multiple-operative optic perception (*optic perception* unifies objects in a spatial continuum) presents the viewer with no single point of reference, no orientation, no top, no bottom, no left, no right, and no separate parts to its whole. Such visual-thought is *homospacial* thought then, as according to Rothenberg in *The Emerging Goddess*, homospacial thought is visual-thought "outside of space or spatiality" which "transcends differentiation". (Rothenberg, p. 342) This homospacial quality itself is deeply suggestive of the non-spatial character of consciousness itself, as indicated by both Clarke (Clarke, p. 231) and McGinn. (McGinn, p. 220)

As a result of this homospaciality of the Apse, I had the peculiar feeling of being flooded over by a cloud-like image cesspool of deep meanings which I could not uncode, as if I was in the midst of a model of the Bohm/Pribram universe as implicate pattern. As such it seemed an imposition onto Paleolithic culture of the very thing that should un-stabilise it: nihilism. Nihilism in that it is no longer a matter of heterogeneous figuration, but of scanning a homospacial criss-crossing and oscillating battle scene between interwoven figures, immersed in their ideational ground with which they have merged in a deliberate process of constitutional defiguration. There is no longer any space outside of the figures to define them, and hence, in a mental reversal, space is immersed in the overlapping figures. The nihilistic cancellation at work here then seemed to be an attempt to deny the validity of subject/object understanding and to deny that any visual erudition of anything whatsoever is possible, in the interests of omnijjective introspection.

Bataille said that what was curious about the Apse was that the artists "abandoned their oeuvre to the next to come after them in an ant-like activity", yet "they did not engrave their figures with less conviction or care". (Bataille, 1979, p. 59) Obviously the artists here did not work from a life model but from the overlapping introspective depths of their visual memories. Indeed likewise, the Apse seems to call upon the viewer to construct a mnemonic psychological interpretation of it based on its tightly woven, intricate abundance, i.e., its latent excess. But even after introspectively synthesising the overlapping imploded individual parts into a mnemonic coherent whole, the Apse retained for me a provocative discord and irritation which tantalised my mind farther towards a withheld (perhaps forgotten) seemingly encoded signification. But as our subconscious is energised by sustained desire that which I sensed to be both obscure and overabundant about the Apse merged into a hybrid interpretation which combined conflicting ideas about abundance and nihilism into an *égréore* complex chunk of omnijjective information which I then viewed as a *single meta-nihilistic mega-symbol*.

With this meta-nihilistic mega-symbol's boundlessness, the Apse appeared to me as the most sacred of the cave's sacred places. Certainly easy conceptions of one beautiful being as distinguished from another (in specificity) are denied and an aberrant invalidation takes place where previous concepts of the finite and the

infinite implode (as do concepts of the voluminous and the vacuous) into a unified field of multiple-reproductive disembodied existences.

This then is a sacred/sexual place of personal intrascoping and transformation (by reason of its creative virtuality and anticipated self-cancellation) as its beautiful representational anti-depictions are neither here nor there but overlap. Clearly what I am saying about the Apse runs counter to the heart of positivism, a paradigm under which we continue to toil unconsciously, as the positivist ideal is a search for rational, systematic thought where images can be broken down, explored, understood, and explained. Here in the Apse we seem to have encountered an irrational systematicism that seems to critique reason, a systematic critique that predates (and in some places overlaps) the modern positivist attitude towards sensation. (Mach, 1914) Here we are inside of a homospatial site of overrunning flux and of hybridisation; a place for the rejection of realism and its values (or at least a place to save oneself from the futile and finally unreasonable claims of dogmatic realism and rationalism). The Apse then represents a thrusting off of optic and mental boundaries and thus is a complex mirroring of our own fleeting impressions which constitute the movement of our consciousness; the perpetual weaving and unweaving of ourselves. Here we are not static, and we have no use for reductive concepts or practices, but we are inside a dialectical space that carries its own nihilistic opposite within itself.

Particularly dense with overlapping imagery is the part of the Apse called the *Absidiolo*, a small, niche-like hollow (like the semi-spherical small niches which house holy relics attached to the apse in romanesque basiliques) just in front of the drop into the Pit. Here the immersant can ostensibly participate in a play of self-tutorial multiple-immersions as one stands in the Absidiolo inside of the Apse which is located inside the groin of the cave itself and introspectively view through sublimated excess an explication of the curved inner-logic of immersion itself: *encased and withheld excess*. Assuredly vision here is no longer the controlling power over animals in nature, but on the contrary, vision itself is engulfed in nature's womb. The motivational force which quickens the Apse then seems to be a desire to undermine perpetual vision and replace it with another type of impregnable (holonogic/immersive) vision, or at least to suggest that there may be other types of vision possible. Its nihilistic excess serves the positive function of questioning the validity of the customary appearance of things and to make connective understanding inextricably felt.

Indeed the basic function of the visual turbulence of the Apse, from the connective perspective, is to precisely shake our conviction that our visual thinking is sound and to hold any such assured convictions, rather, in suspension. Hence it is only routine that formal issues (where consciousness may be said to be self-referential and self-sufficient) would arise over any humanist narrative ethic, as the Apse is more concerned with a recycling of psychological energy than with optically correct (in Virilio's terms) astuteness. Hence, freed from

representational obligations, dark chaotic powers of consciousness are unleashed via the Apse's repressed excessive exuberance.

When interpreting my immersion in the Apse we must remember that even the simplest perceptual activity of viewing discrete images utilises higher-level cognitive activity, as perceiving anything involves description and inference. (Hochberg) Indeed perception utilises a plethora of built-in assumptions and hypotheses as it fills in absent information and draws conclusions based on (but not reducible to) incoming data in terms of part/whole regions and figure/ground relations from which there eventually emerges a preferred percept. (Koffka) Keeping in mind that the human's natural FOV is roughly 120° vertical by 180° horizontal and that the Apse's perceptual-field far exceeds these parameters, the resulting *flooding-over effect* of the Apse (which is significant in creating the immersive effect) accounts for some of the visual chicanery experienced here. However, in the Apse the level of evasive mono-complexity (given the uniform shading in which the one sombre value dominates the complex visual arena) of the fouillis also challenges preconceptions of legibility based on our ability to identify and locate figures in their ground, and this made me wonder if the visualisation chamber I was in was not perhaps a training spot for the hunters to improve their discerning vision, so as to aid them in visually discovering animals from within their tangled natural camouflage. But also on scanning the systematic, intricate and perplexing inert spread of the Apse, one cannot but sense that in some way one is looking at a representation of the metaphysics of orgasm and death, and that by absorbing its visual code one was looking sex/death in the face. To be, or not to be: that is the paradigmatic choice when visualising form into and out of existence when examining the elusive alternatives made manifest here. Being, beings, or nothingness: all are tentative conditions of resolution (or forestalled resolution) here; all spout their own ontological/neurological preferences.

In this purging atmosphere of imploded meta-nihilistic sacrilege, spontaneous reflexes only go so far and reflection necessarily takes over in search of an expansive meaning. Yes, nihilistic amanuensis and jubilant Baudrillardian catastrophic implosion are here, not only in how this staggering image-dump can be read, but also in terms of how its creation entailed the task of disrespecting the care with which marks achieve representational artistry in an apparent desire to achieve and contemplate radical negation. This scouring of assertive vision must have been deemed necessary only precisely here, as in the other galleries, very often, superimposed images respected the marks previous laid down and sensitively incorporated them into the ensuing hybrid super-impositional compositions. By ransacking representational vision so, the Apse paradoxically partakes in the category typical of major art (regardless of its marginal standing within the cave and within Prehistory) as it seemingly rejects the figurative tradition in order to reinvent it as entrancing meta-(or supra)-representation. Thus it is major in the way that John Cage's musical composition/non-composition 4'33" is in forcing us to astutely consider silence as sound. And as such it is a meditation on

fullness and emptiness: on the emptiness of fullness and the fullness of emptiness. And this is its key immersive exemplary value.

On further reflection I found the Apse encounter to be in rapport with the philosophy of Hegel where he maintains that *our absolute sense is first a pure being identical with non-being*. (Hegel, 1949)

Archaeologists are continuously undertaking to understand the marks left here from this inaccessible epoch as they analyse its dishevelled iconography in hopes of ascertaining why this tangled impulse was consummated. Most do not see however that the Apse defies the common assumption that visual art is associative, that it is based on the human mental capability to make one thing stand for and symbolise another, in agreement with society. The usual assumption is that art-marks on a surface denote content, not just to the mark-maker but to others as well. As example, the Abbé Henri Breuil (1877-1961) (speaking generally about Lascaux) maintained some of the mystifying, abstract, geometric marks represented the hunting paraphernalia of traps, snares and weapons (Breuil) and Leroi-Gourhan placed these abstract marks into a category based upon sexual duality where dots and strokes represented male signs, and ovals, triangles and quadrangles, female. (Leroi-Gourhan, 1968) There is mixed agreement on these two interpretations, but all we know for sure about the abstract constitution of the Apse is that its dynamic cluster of representational/anti-representational operations (and the meta-nihilistic/mega-symbol boundlessness which it contains in its kitty) were reworked over the span of many centuries. However by no means do all of the superimposed figures date from different times, thus their overlapping is not a simplistic function of time nor is it for lack of space. Thus its abstract intentionality assumes a certain degree of lucidity.

The Abbé Glory, who lived in the Lascaux cave for several years while making an inventory of its contents, discovered that in the Apse there are several *re-engraved figures* (Leroi-Gourhan, 1968, p. 316) which is again baffling as it cuts against theories of anti-social resistance to figural thought and places us in the functional realm of *cognitive dissonance*, the psychological term denoting the mental state in which two or more incompatible or contradictory ideas are held to be equally sustainable. (Festinger) Hence the Apse's cognitive dissonance served a virtual function if we remember Brian Massumi's definition of the virtual as "a lived paradox where what are normally opposites coexist, coalesce, and connect...". (Massumi, 1995, p. 91)

If the Apse functioned as a mnemonic devise, or as a site of hegemonious non-being severed from any practical purpose, we shall never know. But it is my hypothesis that the Apse chamber functioned as a cognitive dissonance visualisation field and defocal virtualising area which adjusted-up the expanding and dilating eye/mind to the awareness of conflicting, non-rational omnijective realities involving sex and death through the use of deeply creative virtual visualisations.

We know that most of our cognitive functions and perceptual processes are carried out by the neocortex (the largest part of the human brain) and that the primary visual cortex is the part of the neocortex that receives visual input from the retina. What we can conjecture is that the subterranean aesthetic visualisation process at work in the Apse may have been used to feedback optic stimulus to the neocortex in a foreseeing enterprise, an attempt to look into the future, as this process of feed-backing impartial stimulus to the neocortex is roughly the basis for magical gazing. (Eliade, 1964) It is imaginable that such a foreseeing enterprise (Huxley, F.) would also be deemed of help in prognosticating the existence and movements of prospective herds of game which would facilitate the success of the hunt, among other things.

To represent the process of this state of looping neocortical stimulus and to fasten a cluster of spirit-images on a wall (immersed and hidden among a plethora of others) is in some sense to snare and overpower the image and, ultimately, to have Hegelian power over it (i.e., Hegel's notion of the absolute consisted in *becoming other in spirit*). (Hegel, 1949) It is curious however to note that in the few depictions within Lascaux where animals have been wounded by spears or have fallen, they do not appear to be in pain. Perhaps what the seers did here was a way of passing into a virtual world beyond the wall by penetrating through the crowded palimpsest-like clutter and joining with the animal's vital spirits.

David Lewis-Williams and Thomas Dowson make a case that after coming out of a trance, enchanter artistically recreated their visions, both as memory aids for later ritual travels and as portals through which they pass into the spirit world. They view cave markings as powerful ritualistic processes, not just as static pictures, and they maintain that the abstract patterns that occur in parallel with the animals found in such prehistoric caves as Lascaux are representations of the phosphorescences that accompany meditative and trance states which accompany seer's practices, particularly those associated with psychoactive plants. (Lewis-Williams & Dowson, 1988) These enchanting practices entailed, it is surmised, trance states which were in some instances produced (in part) by natural chemicals when ingested by an enchanter in order to induce a trance for revelatory purposes. Altered states of consciousness induced by hyperventilation, rhythmic movements or psychoactive drugs universally produce *entropic* visual image-fields (phenomenon derived from the basic structure of the human optic system (anywhere from the eyeball to the visual cortex of the brain) *within vision*). In his book *Alchemy of Culture*, Richard Rudgley gathered supporting evidence (based on the detailed knowledge of local flora and fungi) from several researchers, that Paleolithic cultures utilised the natural distributions of psychoactive species in their locale as an early feature of their cultural development. *Cannabis sativa* was a known intoxicant in prehistoric Europe and hemp seeds have been found at a variety of Neolithic sites. (Rudgley, p. 28) Trance states too were created and augmented by the utilisation of hyperventilation and almost always in the context of rhythmic repetitive singing, drumming, dancing and clapping. According to Lewis-Williams/Dowson's adapted three-stage neuropsychological model, people who hallucinate in the later stages often experience a sensation of a vortex or rotating tunnel around them (vortex

or tunnel shapes often appear as individuals enter the deepest stage of a trance fostering a sensation of travelling through a passageway). At that point subjects come to inhabit (rather than merely witness) an hallucinatory immersive world. (Osmond & Aaronson)

One may speculate that the Apse served (and/or reflected) such a surrounding process where the self is experienced as capacity rather than existential identity, and where the evaluation of self has been revised from bound to boundless. Such consciousness represents a paradigm shift which relativises other recognitions of self-consciousness. It is pertinent that in *A Thousand Plateaus* Deleuze and Guattari describe this shift towards boundlessness as one's becoming a *body without organs* (BwO) in terms of our self-shifting representational planes emerging out of our field of compositional consistency, for the BwO (according to them) is an *insubstantial state of connected being beyond representation which concerns pure becomings and nomadic essences*. (Deleuze & Guattari, 1987, p. 510) Deleuze and Guattari go on to say that the BwO "causes intensities to pass; it produces and distributes them in a *spatium* that is itself intensive, lacking extension. It is not space nor is it in space; it is matter that occupies space to a given degree - to the degree corresponding to the intensities produced". (Deleuze & Guattari, 1987, p. 153) According to Brian Massumi, the aforementioned translator of *A Thousand Plateaus*, the BwO is "an endless weaving together of singular states, each of which is an integration of one or more impulses". These impulses form the body's various "erogenous zone(s)" of condensed "vibratory regions"; zones of intensity in suspended animation. Hence the BwO is "the body outside any determinate state, poised for any action in its repertory; this is the body in terms of its potential, or virtuality". (Massumi, 1992, p. 70)

The above scenarios suggest a merging of awareness into first a more restricted, and then an expanded, intense statement, which is the principle of entering a virtual world. This fact, and it is a fact in terms of VR, surprisingly corresponds to Paul Virilio's central pessimistic message concerning technology: that *nothing is acquired without loss*. (Virilio, 1991a) Thus it is possible to say that such states of manifestation are distinguished according to the degree to which potentiality is energised through restriction, similar to the construction of a *metaball*, which in VR is an *equipotential surface created around a particular* made possible after specifying a tacit point and assigning it a radius and intensity for the metaball to adapt. When approached in the virtual world, metaballs blend their surface shapes to form a smooth equipotential surface. (Psozka & Davison, 1995) To apply the metaball model to consciousness would suggest that a possible criterion for making qualitative distinctions is the degree to which the potential states of consciousness are unfolded and experienced as a smooth totality.

Support for Lewis-Williams/Dowson's visualisation account has come from the influential archaeologist Jean Clottes, scientific adviser for prehistoric art at the French Ministère de la Culture. Clottes has joined Lewis-Williams and Dowson in an investigation of their neuropsychological model in an attempt to fill a need for

testable theories of why people inconvenienced themselves to such an extent as to create these intensive, highly seductive, immersive spaces. I have taken interest in their work as from it we might extract possible immersive intentions and gesamtkunstwerk principles from the prehistoric painted and etched inner spaces. The research which Lewis-Williams and Dowson first published in 1988 has been refined more recently by Jeremy Dronfield in respect to the passage tombs of the Irish Neolithic, one of which, Newgrange, will be discussed below in immersive terms.

The neuropsychological literature (Gazzaniga, 1995) teaches us that trance states proceed in their deepening in stages. Shimmering, incandescent, shifting patterns (referred to in the neuropsychological literature as *entropic phenomena*) have been shown to be produced early on in the trance process when syncretistic vision takes on an all-over field-like quality. Resulting entoptic form-fields contain grids and lattice designs, dots and flecks, zigzags, curves, and filigrees or thin meandering lines (all apparent in the Apse). In deeper trance states, these fields, depending on the state of mind and cultural penchant of the enchanter, are often, according to Lewis-Williams & Dowson, experienced as a rotating vortex or tunnel that seems as if it was completely sealing off and surrounding the subject in an immersive subjective world. The objective external world is progressively excluded from vision and consideration and this field of inner enclosure grows ever more florid. (Lewis-Williams & Dowson, 1988)

These researchers now hypothesise that the art adorning caves, stone shelters and tombs, delineate trance induced immersions stimulated by congesting particular natural molecular arrangements which produce psychoactive effects in the human brain; molecular arrangements which have had a significant cultural history of religious use in inducing visionary, mystical trance states. Accounts of hunter-gatherer and foraging groups include descriptions of enchanters who occasionally conduct rituals that they believe allow them to travel to parallel worlds set out in local belief systems. In these realms, deceased ancestors, deities, and miscellaneous delicate creatures await the enchanter, who deals with them in ways intended to meet indispensable communal needs. (Leroi-Gourhan, 1964) In preparation for their mysterious interchanges, enchanters typically took steps to instigate trances through isolation in dark places, by frenzied dancing, through rapid breathing, and/or through the ingestion of hallucinogenic plants. (Boas)

The validity of exploring theories of altered states of consciousness depends on our capacity to overcome that quixoticism which enthrals the mind and takes it no further. That in turn depends on the understanding that the subject experiencing an altered state of consciousness remains in principle the same; the consciousness is essentially that of the same person, and the content of consciousness, the ideas and dreams, are those of the same person also, albeit revealed at a heightened level of intensity by the removal of inhibiting agencies and habits of mind. (Osmond & Aaronson) It is on this basis that Walter Benjamin demanded that the revelations of ecstatic visions be made subject to the same criteria of knowledge as those of the sober state, just as *the*

conventions of conformist ideology must be treated to the same scepticism as one applies to raptures and dreams. (Benjamin, 1978)

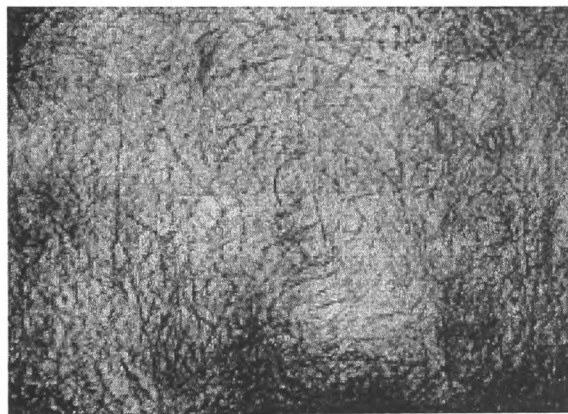
If one accepts most of what I have said thus far as concerning the alteration of consciousness in the Apse, we may now surmise that this altered consciousness (further altered by the meta-nihilistic chaos of repressed excess) within the Apse would have at least two aspects to it. First, similar to the consciousness shift sometimes experienced when engaging in sex, it is an unleashing liberation and a breaking free from the world's ordinary representational space. This immersive domain is one where one not only transcends narrow conceptual territories, but where one also frees oneself from all the desires of security which limit the familiar experience of everyday life. But it is also an enraptured experience which brings BwO fusion-vision into a larger abstract reality, i.e., life's covert implicate order where boundaries which make up various territories are transcended by our relation to the desire for totality. (Godin)

In seeking to understand early immersive aesthetic impulses then, I came away from Lascaux's Apse with an incisive trust in its conjectural goal of serving as a vehicle for BwO *inter-special disembodied connectedness*. Supporting such a theory on my part is the so-called sorcerer panel in the cave of Trois Frères, also in the French Pyrenees. Deep underground in a cramped cavern (like the Apse) a rendered half-human/half-animal figure dominates the space. The human/animal figure is staring directly out of the wall (which is unusual for Upper Paleolithic cave art). Just underneath are several heavily engraved panels, a commotion of animal figures with no apparent order or pattern (as again in the Apse). In the midst of this chaos of muddled excess is another human/animal figure and directly in front of this image is a reindeer's hind-legs and rear-end with its female sex prominently displayed. The sacred/sexual immersive (trans-special) potency is palpable.

This proposed explanation for the dark excess of the Apse cannot be proven, nor, I think, disproven and thus it remains a moot point, however fascinating. Though obviously imbued with meaning, we unfortunately are unlikely ever to know the true meaning or function of the image-space of the Apse (or the other marks of the Magdalenian people for that matter). What I know though, with certainty, is how the immersive amplitude of the Apse operated on me in the year 1997, and what it did was to collapse the inherited meaning of human image making into a more inclusive and available sense of excessive ebullition and into a dynamic feeling of wanton sexual climax. The shrouded scatter stirred my desire to seemingly unfold and deliver forth a sanctioned libidinous pathos where forms of salacious creative ferment and levels of self-indulgence are concurrent. From this state of floridity it might be possible to further define immersive states of consciousness as those which *contain a condition in which reality is perceived as consisting of more than that which everyday vision brings to light*. Such immersive states bypass discursive counterintuitive processes and confer a greater scope to holonetric vision and therefore an enhanced and expanded unanimity with ideals of totality.

Bolstering this contention is the fact that before leaving the Apse I had looked around down the Passageway and into a portion of the Salle des Taureaux and I recall these chambers taking on the character of a moist orifice. At that point I felt like a BwO ravisher about to act out some unfathomable, risqué, multi-genus sexual act, as if I was emancipated to ford my human anthropocentric sexual frontiers and burst out of my specific species identity and into that of a bull, horse, peacock or peccadillo; just as I have frequently imagined myself doing when engaged in sexual union. It is this sense of inhabiting a new corporeality in obligato that is entirely unnatural, preposterous, and variegated which, as we shall see, holds importance when uncovering the idealised desires and onastic qualities of the immersive art experience.

What additionally fascinates is that this fine jumble of delicate lines, some beautifully representational and others again not, corresponded to the prolonged series of greyish drawing with which I began my career as an artist some twenty years ago: drawings which had partially been conceived of as a shadow of our nervous system's meshed neural signals.



Joseph Nechvatal, *XS 1986*

Thus the Apse seemed as an idealised shred from my own memory and I nearly felt that from the ceiling angelic divinities would pelt garlands of roses down on me. We should note however that it is common to find prehistoric stones of various sizes that were incised with a jumble of overlapping animal drawings in no apparent order, piled on-top of one another to the point of illegibility. (Leroi-Gourhan, 1968, p. 33) However we can say with assurance that the Apse's brimful-room style is almost unprecedented, save for certain panels in Les Trois Frères and at the cave of Combarelles, a nearby Périgord cavern which I subsequently visited the next day.

On exiting the cave of Lascaux, striking was the sense of openness experienced as one returns into the light, one's eyes reconstricting as one passes through the sparsely wooded area and emerges into homogeneous light

on top of the hill with a magnificent vista at one's feet. It was there I spent the night in an auberge in preparation for a visit to Combarelles.

The cave of Combarelles, like the Apse, contains an enormously doleful pile-up of almost imperceptibly engraved drawings deep, deep within the once almost inaccessible wet belly. A prolonged walk inside the cave preceded any encounter with the art, but once encountered, like in the Apse, depicted forms start snowballing and overfeeding on themselves. Here too our visual-mental system self-devours the assumed reality principle (Freud, 1974), ultimately causing its downfall by absorbing realistic representation into a homospatial dissolution of form. Like the Apse, it too is colourlessly elaborate, heady, and intricately composed, but here I felt not ravished nor aroused nor stretched by the hyper-fastidiousness of the obscure excess but ruffled and crushed beneath the cave's monotonous dark and inaccessible logic. Indeed here, as in the Apse of Lascaux, representation was problematic and the normal linear depiction of figurative assurance failed in favour of a multi-linear non-sequential processing. Certainly the etched walls did not have one singular classical point of view or a fixed position from which it depicted being and that it too operated on the dynamic of a supra/meta-dataload; but this operation was never mitigated by other colors of thought which might have allowed Combarelles to transcend the limitations of its own pictorial assumptions via a critique of them, as Lascaux had managed to do.

What the open-endedness of the piled-up BwO disembodied fabula at Combarelles suggested to me, was the collective abstraction of the production and distribution of every possible representation along with the super-human desire for existing pluralistically in many orbs simultaneously. When I thought of the hyper-connectivity of its indistinct veneer of interlaced lines, I saw Combarelles as a meta-idea cove which functioned by criticising the discourse of traditional understanding by measuring the distance and difference to which coherence goes, and indicating from whence it has come; complicated blurriness.

In 1980 a simulation of the Salle des Taureaux was created by the transfer of life-sized colour photographs onto a base made to reproduce the shape of the original chamber. This immersive exhibition can now be seen in the Musée des Antiquités Nationales in Saint-Germain-en-Laye. In 1983 another reproduction was completed near the Grotte de Lascaux in an enormous concrete bunker which copies the shape of the Salle des Taureaux and the Axial Gallery, called *Lascaux II*. Here painters have reproduced the figures and symbols of these two galleries exactly as possible using the same painting materials as the Magdalenians used. *Lascaux II* also contains a small museum which is educationally informative. There is no sense in calling it a copy. It is an educational tool.

The same is true of the artist Benjamin Britton's 16 million colour, high quality definition *VR Cave at Lascaux* which utilises an HMD system to view high-resolution image maps. Britton's immersive VE is an

educationally rewarding experience, and like Lascaux II shows something of the cave to those (almost everyone) who may not enter it. However we would be deluding ourselves in pretending that these simulations approach in any meaningful way the experience of immersive consciousness which can be gained during incautious moments within the actual Grotte de Lascaux.

BIV: The Eros and Thanatos of Newgrange and Egyptian Embellished Burial Tombs

Long live the immaterial!

-Yves Klein, *The Chelsea Hotel Manifesto*

Through this hole

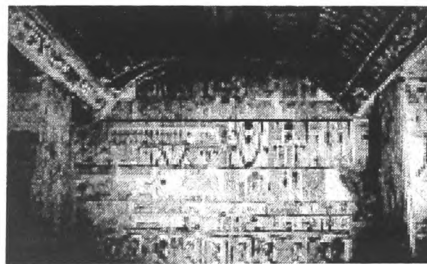
*at the bottom of the cavern of death,
the imagination escapes intact.*

-William Carlos Williams, *Paterson*

Never again will the real have to be produced: this is the vital function of the model in a system of death, or rather of anticipated resurrection which no longer leaves any chance even in the event of death.

-Jean Baudrillard, *Simulations*

Immersive ornamental funerary space (the burial chamber tomb) typically implies a belief in a disembodied afterlife involving the corpse in some transformed way. Characteristic of the burial envelope is the sarcophagus; a vessel, more or less decorated, which contains the corporeal remains of the deceased which itself is placed within an embellished burial chamber tomb. For my investigation into immersive attributes I entered some admirable early examples of this inclination in the Luxor region of Upper Egypt known as the Theban necropolis, most notably the recently opened (to the public (1995)) tomb of Queen Nefertari (located in the Valley of the Queens), the tomb of Anerkau (nearby in Deir El-Medina), the tomb of Sennofer (at Qurna-Thebes), and most spectacularly, the tomb of Ramses VI (in the Valley of the Kings). All of these tombs, plus that of Seti I (which was closed for renovation), at their inner core contain shimmering immersively-favorable wall paintings which include overtures towards fashioning an overall, continuous, and enveloping hyper-totality. This ancient approach of painting the surrounding inner walls first appear in Egypt in the 24th century BC in the pyramid of Unas at Saqqara.

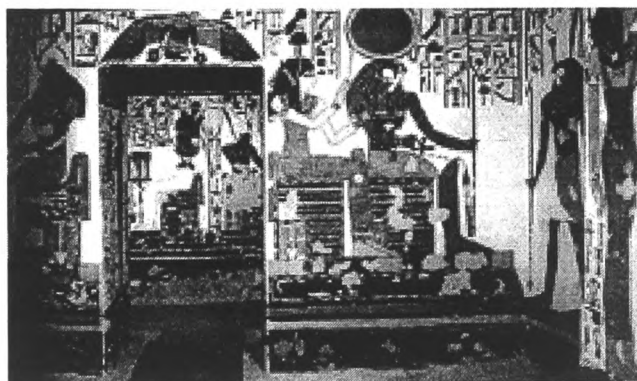


detail from the tomb of Ramses VI

All the above mentioned tombs share the visual belief that the tomb was the eternal dwelling place for the consciousness (and/or life-force) of the deceased (the *ka*) and as such was elaborately painted so as to create a satisfying everlasting abode for their disembodied remains: their *kas*. These *kas* (which were considered animate doubles of the deceased) gained their own identities with the death of the flesh. A Pharaoh's *ka* would either continue to exist in the tomb or would travel off into the underworld. To help achieve this

possibility, illustrated texts from the *Book of the Dead*, the *Book of Amdut*, the *Book of Gates*, and/or the *Book of Litany of Ra* would be painted in the tomb's inner rooms on all of its walls and the ceiling. For the king's tombs the structure of the tomb itself was designed to resemble the underworld, with a prolonged, inclined rock-hewn corridor descending into either an antechamber or a series of sometimes pillared halls, ending with the burial chamber. But it is the burial chamber's painting which concerns us most.

With the 15th century BC tomb of Nefertari we gain entrance into the best preserved immersive painting from ancient Egypt in existence. It is unquestionably considered the finest painted Egyptian tomb now known. Every metre of the tomb is painted in its three chambers and connecting corridors, adorning the walls with colorful scenes of Queen Nefertari (one of which shows her offering a bowl of milk to the Goddess Hathor, the cow/woman hybrid goddess of joy and pleasurable love whom the Greeks later associated with their Aphrodite) in association with the *Book of the Dead*. The ceiling is festooned with a field of tightly organised golden stars.



antechamber in Nefertari's tomb

Nearby are the two smaller painted tombs of Anerkau (a functionary) and Sennofer (the 15th century BC chief gardener at the Temple of Amun), both which charm the holonic eye with their intimate immersive qualities. Particularly Sennofer's tomb's ceiling, painted with an all-over network of grape vines which curl down slightly over the top of the walls, is immersively fetching in comparison to Anerkau's tomb's haunting but far more rectilinear treatment. But most immersively impressive of them all was the burial chamber in the tomb of Ramses VI, particularly with its mammoth umbrella-like barrel-vaulted ceiling portraying the mother Goddess Nut, in split mirrored grandeur, integrated into the swelling sapphire sky. Its arching ceiling, which breaks us out of the boxy confining structure of most tomb chambers, and huge surrounding wall paintings, similar in many ways to the tomb of Seti I, overwhelms the FOV, even while maintaining its quasi text-based legibility. Here one attains close to the self-evaporating feeling which we saw typifies the psychic immersive condition at Lascaux.

Following the pharaonic era in Egypt (3000-341 BC) the classical Greeks cremated their dead, so they used urns or vases to encase the remains, however the Hellenistic Greeks often buried their dead in sarcophagi, often with full-size representations of the deceased (and sometimes spouse) on the lid, and with magnificently cut representations of the actual or imagined life of the deceased (or mythological stories) on the front and sides (and more rarely the back) of the vessel itself. The Romans, although they oscillated between cremation and inhumation, imitated such forms of burial encasement. (Panofsky, 1992)

Indeed belief in a disembodied afterlife (in one form or another) has been an efficacious impulse since prehistoric times occasioning imposing sacred mounds, funerary temples, chapels, funerary reliefs and murals. If the presumption is that the BwO will live continuously in a more excellent supplementary world, it will presumably require clothes, jewelry, utensils, furniture, vases and other utility implements, all of which are commonly found in funerary sites. Indeed, without funerary space our knowledge of the past would be proportionately less the further we go back in time. (Murray) A prime example of prehistoric immersive funerary space built atop a small hilltop (originally constructed circa 3100 BC) is the passage-tomb found unexpectedly in 1669 called Newgrange.

Near Newgrange, in the same 7.8 square kilometre (3 square mile) area of the Boyne Valley, are grouped more than thirty prehistoric monuments, including the tombs of Knowth and Dowth. Newgrange is a vast stone and turf mound about 85 metres (280 feet) in diameter and 13.5 metres (44 feet) high (in restored form) which contains a thin passage leading to the central apse-like burial chamber. Outside the base, 12 out of the original estimated 38 large boulders (up to 2.4 metres (8 feet) high) form a ring of about 104 metres (340 feet) in diameter which circle the mound. (Lippard, 1983)

This stone circle was built about 1000 years later than the original mound structure which is retained by 97 large horizontal stones many of which have beautifully engraved patterns of spiral, lozenge, zigzag and other abstract symbols. The most famous of these is the stone marking the entrance, with carvings of a triple spiral, double spirals, concentric semi-circles and lozenges similar to those found in Brittany (France) at Gavrinis.

Above the entrance passage is a rectangular roof-box opening which precisely aligns with the rising sun at the winter solstice on each December 21st so that the rays of light caress the soil at the center of the tomb for approximately 20 minutes. Many of the upright stones along the walls of the 19 metre (62 foot) passage, which follow the rise of the hill, are richly decorated. The roundish cruciform chamber inside the mound measures 6.5 by 6.2 metres (21.5 by 17 feet) with three recesses and is roofed by a magnificent corbelled ceiling reaching to a height of 6 metres (20 feet) above the floor. In the recesses there are three Absidiole-like massive stone basins which presumably had some ritualistic use. Excavations in the central chamber produced

the remains of two burials and at least three cremated bodies as well as seven marbles, four pendants, two beads, a flint flake, a bone chisel and fragments of several bone pins and points.

Entry into its inner space was arduous, though in a different way than most prehistoric caves, in that it was not a long passage, but a difficult one because one must slither energetically through a very narrow passage corridor before reaching the pivotal opening. Once there, it was a substantial immersive experience for me, as being inside Newgrange I detected an antediluvian consciousness which contains an emotional enlargement concerning the sad sacredness of death along with the bliss of sexual union. Indeed this consciousness consisted of a morose intensity concomitant with a joyful confidence in human oneness. The tomb's configuration clearly suggested the female sexual reproductive system: the outside suggested the brimful breast; the entry and portal, the vulva; the passage, the vagina; and the inner chamber, the womb. This double realisation is particularly clear when the womb-like chamber is brought to illumination by the penetration of the sun's rays (which were simulated by a warm electric light for demonstrative purposes).



Newgrange interior

Such sexual indications recall Beatriz Colomia's statement in the "Introduction" to *Sexuality and Space* that "the politics of space are always sexual". (Colomia, p. i) So accepted, the sexual politics of Newgrange are then feminist in that Newgrange (for me) is indicative of the underlying poignancy of pre-natal being/non-being. Its protuberant roundness seems to represent this being/non-being (i.e., becoming/leaving) indicative of pregnancy. Its internal structure suggests the female reproductive anatomy penetrated by the life-giving sun (which reveals). Yet the sun's rays are rare and fade and thus represent non-being. Indeed these fading rays are the true monument to death in this tomb. Hence Newgrange's magnificence is the sacred dynamism of the libido in face of death.

Newgrange's virulent fertility is both absorbing and elongating then and, as such, it frees being and non-being from touches of commotion and horror and includes them in its cavern of serene pathos. Here Eros inverts into Thanatos, and Thanatos inverts into Eros. In this onerous dual existence, contemporary consciousness

feels an unaccustomed attraction for, and a new delight in, the spaciousness of fusion, not through the sole fusion of sex and death, but from the saturated magnitude of Newgrange's artistically construed sense of decomposed transport/union which I found to be characteristic of its hybrid art/life/sex/death viractuality.

BV: The Expansion of Prehistoric Ornamental Sheathing

Art perhaps begins with the animal, with the animal at least who carves a territory...
-Gilles Deleuze from Gilles Deleuze and Félix Guattari, *What is Philosophy?*

Is the next step in evolution to be the transformation of man into nothing more than electronic patterns?
-Alan Watts, *The Book: On the Taboo Against Knowing Who You Are*

No image satisfies me unless it is at the same time knowledge...
-Antonin Artaud, *Manifesto In Clear Language*

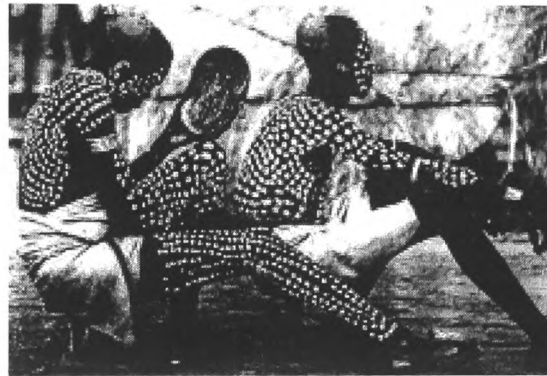
We shall now turn our attention to an aspect of immersive mind which predates the painted prehistoric cave space and the prehistoric immersive passage-tomb while also outliving it; the aspect of body (and eventually environmental) ornamentation. This is an aspect of the instinctive immersive inclination which the literal-minded might dismiss as superfluous, but which I take as pivotal. It is pivotal in that as immersive art depends on an overall enveloping visual hyper-totality, ornamental spread-distribution of visual incident (which therefore calls upon the optic procedure of spatial summation) prepares holonic vision-cognition for the continuous but coherent quality essential to immersive art.

The word *ornament* in Latin means *significant embellishment*. In its humble, early form it usually is constructed of intimate but visually elaborate designs added to adorn a body or (by extension) a tool. Less intimate, it is used to festoon an edifice or an environment, enlivening the expansive space with visual interest. The Sanskrit term for ornament used by generations of Indian aestheticians is *alamkara*, a term which has been traced back to the Vedic period where its meanings ranged over notions of adornment, beautification, ornamentation and enhancement in order to *invigorate* or *make fit for a purpose*. (Havell) Thus, apparently, ornamentation not only serves to please the eyes of the beholder but also fulfils a beneficial metaphysical purpose. This I take as part of the immersive metaphysical impulse towards omnijectivity.

As heretofore mentioned, the Cro-Magnons practised body ornamentation, however scholars have not yet been able to agree on the origin of body ornamentation as the field is too complex and ubiquitous (while superficially similar manners serve diverse ends). However, it is assumed that its beginning must be sought in the need to adorn and/or sanctify the human body for metaphysical reasons. (Smeets) Tribes of the Mount Hagen area of New Guinea practised an art that existed only in terms of bodily adornment, practising no pottery, no carving, no decoration of homes or burial-grounds (Henri, p. 7) so there is nothing superfluous or gratuitous about the human desire for body ornamentation per se. Clearly it has a symbolic significant essence (sadly often forgotten today and hence turned into mere eye candy) so fundamental as to be shared by nearly every ethnic group on the planet since human time began. (Borel, p. 20) The lavish amount of time

and patience encoded into the world history of adornment suggests an alternative sense of continuance freed from the sense of pressing urgency that currently dominates Western mechanical (turned digital) experience.

Ornamental marking allows the individuals inside a tribe to be ascertained in sanctum by defining themselves from the outside in terms of their own ornamental criterion. (Auge, p. 33) Tribal culture is collective and its ornamentally marked spatial domain, therefore, is essentially public to the members of the tribe as they pass through the various phases of crescendo and diminuendo of their lives. In ornamentally marked tribes, each and every member is doubly conceived and doubly understood in spatial terms as blending into the inner circle of the tribe while being separated out from that which is outside of its constructed periphery (with the possible exception of psychic attempts to penetrate the animal spirit). In this respect tribal ornamental designs are not decoration but indispensable immersive art in that they are expressions of passionately embellished borders which entail encircling conceptions and ambient thinking.



Karos tribal body painting

Though ornamental body-marks may functionally indicate to the outside onlooker (and mirrored self-beholder) beauty, status, group identity, wealth and even virility; from the inside we have what looks to be an intensely immersive art, as one is literally wrapped (sometimes) in the markings on all sides, even while being hindered from seeing its totality (as with full body scaring, painting and tattooing).



Sumas tribal body painting

Body ornamentation appears to be, then, a primary global human expression tantamount to the expression of immersive ideals, in that it is often implemented ritualistically in an encircling way through its distribution within a community. The impetus to adorn seems to stem from a deep rooted sensibility to mark incidents of life all around one with auspicious symbols and designs. (Ableman) Its goal is not only to indulge perceptual stimulation, but also to "impregnate and transform it" as immersive space. (Langer, 1953, p. 62) This makes space appear rapturously metaphoric and necessitates an act of immersive interpretation.

Ornamental design (body or otherwise) generally assembles a repetitive intertwining visual logic which ensnares the eye and establishes the impression of an enveloping heightened concern which suggests immersive ambience. As such ornamentation is almost mesmeric. What it already always expresses, even when not as an actual immersive space, is an unequivocal notion of plethora in terms of its reproductive and distributive feeling (and its ardent efflorescence) which strives to express the basic vital rhythms of motion, rest, and rhythmic unity reminiscent of voluptuous human sexuality.

Such is the case explicitly with the Maori men who ornament jade sculptures and then turn them over to their women who rub them between their oiled thighs to give them their final shine. (Borel) Through the bountiful repetitions of ornament then, by way of its general animated linear motif, ornament expresses self-conscious immersion in the pulsations of the biosphere with its throb of the heartbeat and its repetitious breaths and copulating rhythms and female sexual cycles. As such, ornamentation imitates through its unconstrained

graphology the pulsation of the reproductive human biosystem, and it is against this invariable repetitive order of things that we can gauge our appraisal concerning the immersive qualities of its consciousness.

This raises the issue of ornamentation out of the opinion that it is mere superficial decoration and into the arena of understanding living and its basis in organic forces which surpass (while using) beautification in the interests of need. And a need it apparently is for some, as we can see by the fact that even during famines the Kalahari Bushmen continued to decorate the naked bodies of their woman with animal fat. (Brain, p. 186) However all that we can say with assurance is that the transformational decorating and treating of the body appears to be a basic human compulsion which is widely practised and that there is an apparent human obsession for immersive ornamentation as evidenced throughout the history of humanity by peoples everywhere compatible with the range of human spatial intuitions. Otherwise we would not detect it so thoroughly throughout the world.

The oldest tattooed body known to date was discovered in 1991; that of a Bronze Age man who died over 5,000 years ago when he was apparently caught in a snow storm during a hunting trip on a mountain between Austria and Italy. His skin supports several tattoos: a cross on the inside of the left knee, and six straight lines 15 centimetres long (about 5.8 inches) above the kidneys. Also there have been found an excellently preserved tattooed mummy priestess of the aforementioned Egyptian love Goddess Hathor from circa 4,160 BP. Hathor is interesting in lactative immersive terms in that she supposedly breast fed Horus (sky God to Lower Egypt) before wedding him. The priestess' markings consist of a series of dots and dashes tattooed on the lower abdomen below the navel and on the thighs and arms. (Bianchi) Considering the number of tattooed mummies that have been discovered, it is apparent that tattooing was widely practised throughout the Egyptian world.

Moko tattoo is unique in that the face was decorated with intricate spirals which were not only tattooed but incised into the skin to make scars in the form of parallel ridges and grooves. With the exception of slaves and commoners, all men were tattooed on the face and most were also tattooed on other parts of the body. An elegantly tattooed face was a great source of pride to a warrior, for it made him fierce in battle and attractive to women. Women were also elaborately tattooed on their breasts, thighs, and legs. (Robley)

The traditional Japanese tattoo differs from the Western tattoo in that it consists of a single major design which covers the back and extends onto the arms, legs and chest. Each design is associated with an attribute such as courage, loyalty, devotion or obligation. By being tattooed in the round the individual symbolically makes these virtues part of him or herself by fully entering into them.

The art of tattooing in Europe barely survived its disapproval by the Christian Church and for all intensive purposes died out in Europe during the Middle Ages. It only reflowered again in the 19th century after increased Western contact with the South Seas and the Far East. In 1870 David Purdy established the first Western tattoo parlour in London. (Brain, p. 52)

BVI: The Psychic Thermidor of the Ornamented Body

Beyond deterritorialisation, another character is often associated with virtualisation: the passage from the interior to the exterior and the exterior to the interior.

*-Pierre Lévy, *Becoming Virtual: Reality in the Digital Age**

It is not my own consciousness I yearn for, but that connection with other consciousnesses that tells me beyond a doubt I am here.

*-Carol Gigliotti, *What is Consciousness For?**

We shall now turn to see how the radical ornamentation of the body (and its relevance to space) become transferred and extended outward onto the body's external sheathing and its surrounding environment. Along with distinguishing psychic or demonstrative frontier significance relevant to immersive art applications, there is apparently, from the beginnings of human culture, unequivocally an exultation in rhythmic embellishment itself which functions somewhere between the reality principle and the pleasure principle. Motifs of ornamentation have appeared in thousands of variations on pottery and other utilitarian articles since prehistoric times. The Bronze and Ice Ages often utilised circles and spirals and in ancient Egypt images of the lotus flower, palms, and papyrus plants were widespread. In the reliefs of the Persians, Hittites, and other peoples of the Middle East scrolling plant forms were often used to formulate an immersively suggestive all-over visual unity. (Speitz) The Greeks, Romans, and Etruscans accented their edifices, vases, and implements with geometric ornamentation suggested by nature. In India, both the sacred and the profane are decorated with ornamental designs that embellish the person and the home; including the floors, walls, doors, and windows.

As demonstrated in the Temple of Horus at Edfu, the largest and most completely preserved pharaonic, albeit Greek-built (237-37 BC) temple in Egypt, ornament unquestionably can be a discernible recurrent pulsation which registers an all-over splendour which accentuates the area of a sacred space. Here carved reliefs (once painted) depict a variety of complex scenes and enigmatic texts which encase one on every side. This effect is even more harmoniously unified today as the painted colors which defined the complex shapes from each other has disappeared over time, leaving only the gesamtkunstwerk-like attributes of mono-hued gray (like in the Apse of Lascaux).

This gesamtkunstwerk-like ornamental phenomenon pervades too the history of India's art, architecture, sculpture, crafts, textiles and interior-decorative arts. Ornamental spread is deemed essential in India's metaphysical space, in both its private shrines and in its vast public temples. It can be a certain motif rhythmically repeated (used in a band or border) or scattered rhythmically over an area (which is the usage most applicable to defining an immersively inviting space). It can be, like at Edfu, an all-over use of lines and forms in which it is difficult to recognise a pattern immediately but which nevertheless exhibits a certain

sustained rhythm and lucid equilibrium. Certainly, like at Edfu, it can be a meaningful symbolic language laden with conjuration for those who understand its ocular tongue.

From one point of view, ornament is essential to culture because it adds stylishness to functionality; but from the opposite view, it is in no sense intrinsic to the body or space or object and is therefore non-essential, indeed possibly detracting from any requisite operation. (Loos) However, whether it be a vessel from the Stone Age or an urn from antediluvian Greek culture, celebration through embellishment has been the energetic impetus behind the culturalisation of humanity. Over thousands of years, since the beginning of recorded history, rudimentary forms have been, at the least, bordered with a rich stream of oscillating visual inflection.

Ornamentation generally addresses environmental forms of nature, features such as flowers, vines, butterflies, grapes, wild animals, or the lapping of sea waves or the rippling of fields of grain. And as such it necessarily imposes an artificially stylised simplification of nature, usually by stilling, exaggerating and flattening her. By emulating nature's cycles and rhythm, ornament however, in its suggestive optic movement, propounds something of the repetitious cadence observed in the movements of nature; a cadence within which we intertwine when engaged in the pleasurable activities of music, dance and libidinous demeanour. Occasionally this human inclination toward repetition and reiteration is blended and made manifest, as with the ornamental buttock flourish, with its stimulating raffia pom-pom, which African Mongo women don as they prance to the drum beats at festive occasions. (Borel, p. 35)

As stated and exemplified, adornment is one of the oldest expressions of human creativity, adding resplendence, desirability, and opulence to appearance. The visual language of adornment usually hovers between abstract geometry and modes of repetitive graphic presentation based on nature, from the simplest border of dots or stripes to the very complex animal ornamentation of the Celts (Green, M.) and the mercurial forms of the Rococo. (Scott) Its function as symbolism stems from its many-in-oneness sense of unity and in its marking off social boundaries, either of which may rise into the province of luxurious value. (Brain) Adornment's relevance to immersive consciousness is obtained when it is specifically employed to create, supplement or complete the expression of a gesamtwerk through its voluminous all-over but unified treatment of space with an articulated seductive opticality.

Towards these ends in a modest way, textiles have been created and used to dress either a person, a corpse, or a dwelling for almost as long as humanity has existed. (Ginsburg) Here colour is likely to be of significance and certain kinds of textiles may be produced specifically for circumscribed purposes. One of the most obvious features of the material culture of Africa is cloth and the most obvious use of woven textiles is as articles of clothing. In Africa and India one or more lengths of cloth may be draped around the body, or

tailored to make gowns and tunics. Modesty, whatever that may mean to a particular people, and protection against the elements are, however, not the only purposes of clothing. (Ableman) Particular colors or decorative/symbolic embellishments may have cultural value such that the wearer is immediately associated with tribal status. Particular colors or patterns may also have political or ritualistic significance. The tribal affiliation of a Moroccan Berber woman, for example, can be seen in the pattern of stripes of her cloak, as I observed in the Moroccan village of Tata. In Benin, Nigeria, chiefs wear red cloth as part of their ceremonial court dress and red (by its association with anger, blood, war and fire) is regarded as threatening. By the wearing of such cloth a chief protects himself from evil, that is to say from witchcraft and from the magical forces employed by enemies. (Ginsburg)

Unquestionably we can see an ornamental *gesamtwerk* treatment of space in the splendour of Moorish ornamental work with its interlacing and interweaving of geometric arabesques. Most recently I experienced an exquisite immersion into such a *gesamtwerk* handling at Saâdiens Tombeaux, a 17th century Moslem family tomb in Marrakech whose elaborate walls vibrate with a translucent (spiritually suggestive) demeanour. This effect also may be readily seen in southern Europe in the buildings of the Moorish Kings of Spain (9th to the 14th centuries) especially the Italian influenced 14th century Alhambra palace in Granada. Here in the Salle des Abencérages on a sunny day, such as the one I experienced, one's specific locus of visual involvement is sharpened and then thrown into embossed relief by the broad scan of detached awareness which cannot easily locate contours of individual events due to their abundance. Hence we can view its *gesamtwerk* ornamental adroitness as a generative set of relations rather than a closed visual statement. As syncretistic awareness, it contains the attributes of all-over organisation and as such promotes the ability of perception/consciousness to see itself *per se*. It thus promotes the generative power for thinking within new frames of reference. As frictionless flow of all-over visual awareness, the Alhambra is more than perceptible, it represents the *sine qua non* of perception. Thus it inevitably gives rise to immersive states of consciousness in which increasingly implicate orders of manifestation are recognised within its sprawling (implied infinite) confines.

Indeed, it is such a recognition of immersive levels (or orders) implicit in Arabic design which evoke infinite spread that interests us here. In such a situation of implied infinity, immersive consciousness cannot be surpassed or added to, but the latent powers of omni-perception which it unfolds may allow it to identify two important aspects of the immersive order. The first of these is the ability to perceive increasingly fundamental immersive principles hidden within the ways we think, and to see evidence of similar principles in the implicate orders enfolded within suggestive levels of infinite manifestation. Ultimately this implies being aware of immersive placement at its most delicate and subtly concentrated level, sensing the blueprint for immersive awareness as an intuitive wholeness. The second level is one where immersive aesthetic space is seen to exist as transformational dynamism and as part of the entire expanding field of vision. Here

immersive consciousness reaches an awareness of its own constitution through art as our FOV potential is united with an aesthetically suggestive state of energy-filled void. (Nishida, 1958) Hence we may come to understand self-construction as "an intensive magnitude starting at zero". (Deleuze & Guattari, 1987, p. 153)

BVII: The Omphalos, the Pudendum, and the Polymorphosic Labyrinth

...which most endures? The world of the imagination most endures...
-William Carlos Williams, *Paterson*

What is fascinating and exercises such an attraction is perhaps less the search for information or the thirst for knowledge than the desire to disappear, the possibility of dissolving and disappearing into the network.
-Jean Baudrillard, *Philosophy Discussion with Jean Baudrillard: Interview by Claude Thibaut*

Examined through the hermeneutic tradition of communicative symbolic interaction, immersion's prevalent territorialising/deterritorialising configuration thus far appears to me to be roughly the *inscribed parabolic space* as we saw in the Apse of Lascaux, in Newgrange's vault, in the psychic circle of ornament and in the domes and niches of Arabic sacred spaces, in that they all suggest the cultural construction of a rounded geographical/non-geographical sense of an extra-sensory field, or in other words, a returnable virtual space embedded within an actual location. And as such they begin to create an immersive cultural domain which is half illusionary and half real, just as any symbol is. (Jameson, 1980) Their rounded order seems an attempt to encircle vast shapeless infinity into a symbolically distinct scope and location through parabolic configuration (indeed what seems to be the case at the circular formation of Stonehedge). Hence immersive consciousness seems thus far to be primarily a function of a desire to create a convincing illusion of non-self-containment through a semi-enclosed parabolic mental space which heralds back to the sanctum of the tribal magic circle, the circle which interpiercingly severs a space of sanctity from the profane. (Pfeiffer) According to Nigel Pennick, the circle is one of the most ancient symbols used by humanity and is seen through the history of humanity as the embodiment of the universal whole, representing the perfect totality of the macrocosm. (Pennick, 1979, p. 119) It symbolises the perfection of totality in that the circle is a geometric figure formed with one line with no beginning or end. (Lethaby)

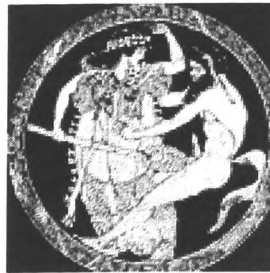
The central spot of the symbolic immersive circle is the *omphalos*, the pivotal, still, capacity-point within the sacred circle. Inside of the sacred immersive circle the outside world is dominated and indeed defined by the omphalos's psychological protectoratship. The conceiving mentality behind the omphalos was that it marked the fixed point of the earth about which the spherical spiritual heavens whirled. Thus it represented a central place which remained steady and enduring while all else moved about it. (Pennick, 1979) Today we know that the earth rotates on its axis once a day, and that it revolves around the sun once a year. In early times however, astronomy was based on an ideal geocentric cosmology according to which the earth was fixed and immovable. The earth was conceived as being at the centre of the universe and everything spun around it. In this cosmology the universe itself was imagined as being bounded by a great sphere to which the stars, arranged in the various constellations, were attached. So while we today understand that the earth rotates on its axis once every day, in antiquity it was believed instead that once a day the great sphere of the

stars rotated around the earth. As it spun, the cosmic sphere was believed to carry the sun along with it, resulting in the apparent movement of the sun around the earth once a day.

The omphalos's quintessence may have been only a scant central fire within a circular placement of stones on the ground which carved out the immersive space of emotional sanctity. However an interpretation of this hoop of stones with centred still-point may be quickly conceived in terms of recognising a point of view within the cyclical arrangements to the surrounding cosmos, as we see with the omphalos's evolution into the classical Greek maypole. (Schroeder) A circle with a marked centre and circular design elements emanating out from the central point is almost universally found in the world and it forms the basis of the floral rosette, one of the oldest and most widespread of ornamental designs. (Langer, 1953, p. 69)

Accordingly, since its Mediterranean origin, Western philosophy has fundamentally presented itself as a theory of the omphalos. And with this idea of the fixed sacred central spot we see the nucleus of the city/state, as the sacred staff of the seer (which was used to inscribe the perimeter of the sacred round circle) turned into the phallic obelisk (rather than the female pudendum) and begins marking the convex power point around which all is organised.

We shall quickly see in this and the next section how the sacred circle (constructed around a central omphalos) connects to the sanctuary of the encircled sacred grove which itself connects to the origins of art in the West and to the maturation of the city/state. Thus far we have established that a parabolic immersive site is interiorly and conceptually encircling in aesthetic immersive sites, in order to enable the swallowed/semi-assimilated subject no avenue of self-protective flight from its excess of signification. What we have seen with the pudendum-like prehistoric embellished cave, passage-tomb, and spatially distributed ornamental enrichment, is that the prehistory of immersion is primarily a history of assertively embellished aesthetic space in service of the virtual, the peripheral and the mercurial. It is for this reason that we will turn our attention now to certain aspects of the nymph myth continuum which make up the enchanted *nymphaea* garden grotto (*grotte* in French and *grotta* in Italian) legacy, for the phenomenological awareness which such a lissom simulacra provides this discourse shall be serviceable in flushing out the extensive meaning of immersive expectations.



Nymph and Satyr as depicted on a 5th century BC Greek vase

Nymphaea is the Roman term used to describe temple fountain-shelters consecrated to the nymphs which were based on simple Agora grotto water spots. A *nymphaeum* under the Romans became a formal temple dedicated to the cult of a nymph, often related to the source of a stream but because these structures were based upon on the Greek natural grotto grove (with spring) the term later became applicable to both artificial fountain grottoes and to monumental public fountains. (Miller, N., p. 17) Descended from classical and eastern Hellenistic prototypes, grottoes proliferated in the late-1st century BC and spread further during the Imperial era when they became a common feature in the gardens of wealthy landholders. A rigorous definition of the term *nymphaea* would limit its designation to sacred semi-enterable edifices that served as sanctuaries of the nymphs, and this is the sense which I am using the term here. Another important distinction to maintain however, is that between the public nymphaeum and the private nymphaeum. Two principle types are evidenced in both cases: the rustic grotto niche in imitation of the Arcadian cavern and the architectural fountain-temple type (for example the, now chiefly collapsed, immense Nymphaeum Hortorum Licinianorum, or the extant Castell dell'Acqua Marcia, both in Rome). In private hands the interior nymphaeum was often located within an architectural apse or in a large niche comparable to the *cavea* of the theatre. The apse/nymphaeum constitutes the primary feature of the House of the Great Fountain in Pompeii, for example. (Miller, N., pp. 18-20)

Clearly entry into strict virtual space is not so much an entrance into earthly expanse as it is a representational passage into non-space, as it does not utilise the land nor develop the physical space amid things and thus is not immediately caught up within the limitation or scarcity of our earth. In fact it metaphorically occupies a pudendemic heaven/moon/satellite space far more than any omphalos-phallicly marked terrain, a space which can (and will) expand theoretically *ad infinitum*. (This is the vast virtual space of *Iridium*, the satellite project now underway which is placing close to 300 communications satellites (at about \$20 million dollars a piece) in low-orbit around earth allowing instantaneous telecommunications from anywhere to anywhere on our planet.) Yet just such adjoining celestial/lunar attributes are encoded into the *nymphaea* origins of the garden grotto with its legacy of immersive exaltation of the feminine and its endorsement of sumptuous love. Thus it is upon the garden grotto's roots as a sacred/sexual nymphaeum grove (based on the sacred omphalos-pudendum) where we shall begin to build upon the previous section's immersive recognitions by continuing to trace the outgrowth of like immersive ideals detected in arcane archaeological sources and philo-theological traditions, both of which are open to interpretation of course. What is stimulating about the nymph and the omphalos-pudendemic *nymphaea* tradition for our purposes, is its usefulness in tracing the cast-around 360° ideal aspect of unhindered virtual space within an enclosed, or partially enclosed, container.

The grotto is an especially puissant space to study the extenuation of cavernous discernment and emotion, in that a grotto can be interpreted from a number of contextual counterpoised positions. It can be seen to

embody the bucolic or the idyllic, the sacred or the profane, the mythological or the prescient, and/or simply be eloquently ornate. The grottoes' space is the space of tranquillity, coupling, solitude, seclusion, obscurity, and cool pathos; but most significantly it is traditionally a metaphorical space symbolising the human vector within the unbroken universal matrix. (Miller, N., p. 7) As such it constitutes a peerless artifice when explicating the annals of immersive ideals and holonogic optics.

Any metaphorical topos for the universe must be in its very constitution indeterminate, complex, unified and unsatisfactory in its denotation. The nymphaeum is that, as its various definitions and types are capriciously broad while all sharing an accordant meaning. In general a nymphaeum in ancient Greece was a natural sanctuary hollow consecrated to the water nymphs. Indeed the presence of moisture is the *sine qua non* of the grotto. The name, though originally denoting a natural vault within a grove with spring, pool or stream (traditionally considered the habitat of nymphs), later referred to artificially fabricated grottoes either private and intimate, or in Roman hands, institutionally grandiose.

In the 16th century the nymphaeum/grotto became an important feature of Italian gardens. Then the site of a spring was usually enclosed in a small building, as at the Villa Giulia in Rome, but sometimes in a natural or semi-natural cavern. The line of demarcation between a nymphaeum and a grotto is not always clear, but the nymphaeum puts greater emphasis on the presence of a supposed semi-transparency.

So as to better understand the nymphaeum's general cultural setting I now shall recall a short history of the garden in general and the labyrinth in particular, as they will inform our understanding of the nymphaea's unique function in delineating immersive benefaction with its accompanying wealth of speculative theories and hypotheses.

All accessible gardens (given their multi-sensorial, encapsulating shaped space and full-scale walk-through range) take immersive awareness to another level of self-consciousness by manner of their contradictory split configuration as penetrable *contrived natural* space. Surely this double paradoxical aspect of the garden space and its inherent self-contradictory self-consciousness may excite and reformat feelings, memories, conceptions and fancies in the way they connect an actual site with a virtual mental space. Hence garden space can be demonstrative of formational viractual models, particularly in the case of the garden grotto; contrived natural spaces predominantly allied with the female, intuition, love-making, and babbling water.

According to Anthony Huxley, the interrelationship between mind, perception and terrain forms the central conception of any *weltanschauung* world-view. (Huxley, Anthony) From the birth of civilisation gardens have been among humanity's preferred immersive sites in terms of their scale's ability to deliver an excess of surrounding visual detail. This is doubly true for the gardens of classical China, for example those in

Suzhou, where the metaphysical Taoist position places the self in the centre of the garden no matter where one stands, as the ontological self, according to the teachings of Lao zi, exists in essence distributed within and throughout all of nature. (Lao zi)

It is significant that in many religious beliefs, paradise, the place of perpetual existence after death and the place of eternal joy is depicted (with no concrete evidence to support it) as a garden of eternal delights. In arid zones, such as Persia, the garden is the very symbol of heaven. Indeed all through the Islamic tradition the organic garden, that basic element of human delectation and vitality, is virtualised into a blissful place where plants flower and yield fruit, trees and caverns shade and shelter, and where water cools and moistens the post-human evermore. (Harrow)



Persian miniature depicting the garden of paradise

Moreover, perhaps oddly, the same is true of the *Garden of Eden*, the mythological cradle of humanity. Eden too was a place of perpetual blooming and fertile reproduction. As described in *Genesis*, the Garden of Eden was the mythical place in which humanity emerged to begin its conspicuous cycle of sex and death. According to *Genesis*, following a fall from grace and subsequent expulsion from the garden, woman began to suffer the pain of childbirth and men the necessity of manual labour in making the land fertile.

If we take the garden to be a microcosmic symbol of immersive configuration, the labyrinth may be viewed as the symbol of immersion itself as the entire point of a labyrinth is in getting lost and searching about. (Weiss, p. 48) That, along with the self-discovery encountered through the search, seems to be the whole point of them. That and their necessarily willed abandonment, all of which is salient to immersive spatial consciousness. Hence labyrinthine understanding offers an understanding of immersive works of art in that it grants us experience by penetrating space/time and, in a sense, secures that space/time for us.

The labyrinth is a cultural garden space blending both landscape and architecture into an intricate search, not unlike the human search for love-making. Primarily a Pagan conscientious tool (like the grotto), its sexually symbolic fertile centre is connected to the maypole of ancient Greece. Certainly the labyrinth embodies the powerful sexual imagery of the seed entering and penetrating the egg and the life of the new-born emerging from the birth canal. Indeed a direct connection with the feminine sexuality of nymphaea and garden grottoes is maintained, in that a fountain or pool of water is most often the objective and terminus of a labyrinth, but the labyrinth's female sexual imagery can only be fully understood if one accepts the insinuation that primordial people imagined that birth was achieved through the intestinal tract. In ancient times, when pregnant animal carcasses were cut open and disembowelled in preparation for consumption there inevitably would be a great out-pouring of the winding intestinal tract mixed up with the foetus. Not knowing anatomy as we do, it is supposed that primordial people took the winding intestines to be the birth canal. (Mattews) As a result these beliefs became part of Pagan lore.

Indeed it is the tacit connection between female reproductive organs and the labyrinth which made the labyrinth seen and used in the past to draw upon spiritual or magical powers in search of fertility. (Pennick, 1945) As evidence of this legacy, several labyrinths in Finland and Sweden are named *lungfrudanser*, which means *virgin dances*. In one of these dances, a virgin stands at the centre of the labyrinth while others dance towards her along the paths of the labyrinth. In another, a young man would run through the labyrinth, and then dance with the girl at the centre. In another variation, a boy would try to reach the girl and then carry her out of the labyrinth. If he did this without making any mistakes, the girl was his to woo. (O'Brien, K.)

The earliest surviving labyrinths, all of classical seven-ring design, are rock carvings and graffiti and patterns on coins, seals and ceramic vessels, rather than being full scale forms that could be walked through or upon, as full-size labyrinth were too vulnerable to survive thousands of years against the combination of neglect, erosion and overgrowth. Early surviving labyrinth designs are found carved on part of an ancient dolmen at Padugula, Nilgiri Hills, in southern India which dates back to 11,000 BC, on a 1,300 BC ceramic vessel found in Syria, and on a 1,200 BC inscribed clay tablet found at Pylos, Peloponnesos, Greece. (Pennick, 1945) The labyrinth carving found inside the *Tomba del Labirinto*, a Neolithic tomb (Bersani, pp. 38-39) at Luzzanas, Sardinia, could conceivably date to 2,500 BC if it is contemporary with the tomb, but later burials make this uncertain. There are at least five labyrinths carved into rock faces above the town of Capo di Ponte, Val Camonica, in northern Italy, ascribed to the Late Bronze Age or Early Iron Age (1,000-500 BC).

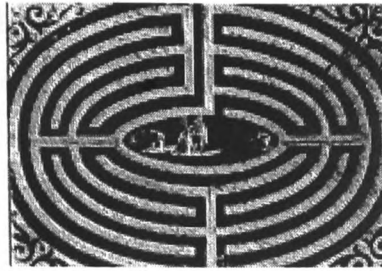
Crete, considered as the place of origin of all the Greek Gods and Goddesses, was a highly developed Pagan civilisation before its volcanic destruction in circa 1400 BC with active trade routes to and from Egypt and other lands in the Mediterranean. Various Cretan coins between 43 BC and 67 BC bore the classical seven-ring labyrinth design, both in square and circular forms. (Reed Doob) This classical labyrinth design is

believed to have originated with the Cretan parable of Theseus and the Minotaur. According to Greek mythology, King Minos of Crete had a craftsman (Daedalus) construct the labyrinth in order to conceal the Minotaur; the half-bull/half-human progeny of Minos's wife Pasiphae and a bull-Zeus. Queen Pasiphae, evidently sexually unsatisfied by King Minos, had ordered the inventor Daedalus to construct a convincing full-size model of a cow in which she could conceal herself, exposing only her vagina. Zeus, greatest of the Gods (who was born inside Idean Cave on the island of Crete) descended in the form of a bull and mounted and impregnating her, resulting in the birth of the half-man/half-beast Minotaur.

There are several variations to the legend of Theseus and the Minotaur, but the main story is certain. Crete had won a victory over Athens and as a cruel tribute required that every nine years seven young men and seven maidens should be sent to Crete to be devoured by the Minotaur, who was now confined in the labyrinth. The fourteen victims were chosen by lot, bringing terror to every family in Athens whenever the tribute became due. Finally, Theseus, son of King Aegeus, volunteered to resolve the matter by slaying the Minotaur. Aided by a ball of golden thread provided the King's daughter Ariadne, Theseus entered the labyrinth, slew the Minotaur and exited the complex space by following the golden thread he had unravelled on his arrival, thus finding his way out and ending the cruel tribute. (O'Brien, K.)

This myth was widely known, as Zeus is a central figure in Greek mythology, and hence became familiar in the subsequent Roman culture. At Pompeii (Bersani, pp. 90-91) there was found a square shaped seven-ring labyrinth scratched onto a crimson painted pillar in the House of Lucretius some time before the city was destroyed by the eruption of Vesuvius in AD 79. It has around it the cryptic words *Labyrinthus, hic habitat Minotaurus*. This example demonstrates that the Romans were well aware of the Greek Minotaur's sinuous labyrinth.

Although not in the classical design, the labyrinth motif was used in mosaic pavements throughout the Roman Empire and these are the oldest surviving full-sized labyrinths we have. A significant variation to the classical labyrinth design is the addition of a second entrance (or exit), so that a procession can enter by one entrance, reach the centre, and then emerge by a short exit without turning round. The design is still essentially unicursal however. The most enduring Roman labyrinths were built in mosaic as such mazes. Other Roman mazes are complicated networks of paths, like a labyrinth, however they are unlike a labyrinth in that they have multiple openings and possible directions (not just one as in a labyrinth) which succeed.



16th century maze design by Hieronymus Sperling

The medium of mosaic offered much in the way of permanency to labyrinth and maze design. As well as being durable, many Roman mosaics were shielded from subsequent erosion by the collapse of the very buildings they once adorned, thus many examples have survived. Roman mosaic mazes consisted generally of a rectangular grid for most of the area which they filled, using the central area for pictorial illustration. (Reed Doob) Normally square and the size of a room, the most popular subject was the slaying the Minotaur, but some Roman labyrinths simply portrayed the Minotaur, or other half-human/half-animal creatures such as centaurs. Eventually maze patterns were incorporated into the floors of some Catholic churches and cathedrals (less the Minotaur) such as in the nave of Chartres Cathedral which contains a majestic maze 9 metres (30 feet) in diameter which penitent Christians peregrinated on their knees.

BVIII: The Nymphaeum as Immersive Model

Since the end of the last century, philosophy has made a series of attempts to lay hold of the true experience as opposed to the kind that manifests itself in the standardised, denatured life of the civilised masses. It is customary to classify these efforts under the heading of a philosophy of life. Their point of departure, understandably enough, was not man's life in society. What they invoked was poetry, preferably nature, and, finally and most emphatically, the age of myths.

-Walter Benjamin, *On some Motifs in Baudelaire*

Grottoes are recesses to be looked at transiently.

-Horace Walpole, *The History of Modern Taste in Gardening*

In the Bohm/Pribramian view, the fertile earth is a kind of vibrational arena in which one omnijectively experiences the pleasures of the flesh while cognisant of the fact that one is an expanding holographic projection immersed in an amplifying holographic orchestration. The effectiveness of such an aesthetic omnijective realisation depends upon advancements in the area of intellectual and emotional spatial conceptions however. Fortunately, the omphalos-pudendum based grotto is possibly the site *par excellence* in which to scrutinise this obviously thorny province of voluptuous viractualism.

To concentrate on the grotto is to summon all that was said concerning the archaic painted cave. Like in the treated cave, the art of the grotto uses (and then surpasses) nature to concoct an apparatus deemed suitable for shaping cognitive-vision/consciousness along the lines of the attributes of the omnijective expanding universe by modelling dilating connectivity in miniature. The discovery in the late-1920s by American astronomer Edwin Hubble (1889-1953) that the universe was expanding implies remarkable things for the immersive space of the arcane grotto, as, like the painted cave, the grotto is a miniature zone of expanding liminality and cognitive crossing. It is a space of escape from the world of naive naturalism (for example that proposed by the Italian theologian/philosopher Thomas Aquinas (1225-1274)) and a zone of entry into the fluid, rhizomatic, and elfin world of connectivism where the spatial restrictions of conventional realism (think of the paintings of Jean-François Millet (1814-1875), Thomas Eakins (1844-1916) or Winslow Homer (1836-1910)) need not apply, even while biological nature remains the grotto's starting point. Withdrawn into this zone of fay interchange, the immersant joins consciousness, not so much with the world outside, but with the classical Arcadian inner world of unconscious preterhuman existence with its mantric cerulean rites of birth, pubescent passage, coupling, incantation and death. (Freud, 1958)

Porphyry, the previously mentioned neo-Platonic and Neo-Pagan author of *De Antro Nympharum* tells us in the French translation that, even in the earliest times, certain caves and natural grottoes were consecrated to the Gods and Goddesses; way before temples were conceived of and built (citing the cave of Lycean Pan in Arcadia, among others). (Porphyry, p. 20) By way of preparation for the grotto, archaeological evidence has indicated that there are traces of a 15th century BC Egyptian sacred garden grove in the temple complex at

Karnak. (Wilkinson & Henderson) I visited the garden spot, which is tucked away deep inside the complex behind the sacred sanctuary temple of Amun (the hidden one), and found it barren but most immersively suggestive with its inner placement and diminutive scale.

Also it was from the Assyrian civilisation in northern Mesopotamia that we find *sacred groves* within which modest shrines were contrived for supplication. Moreover, archaeological evidence shows that some Mesopotamian structures had pits positioned into their rooftops which were planted with a variance of sprouted ferns and flowers which constituted a minute garden site for contemplation connected with the cult of Tammuz and/or Dummuzi; sacred cults later imported into Greece where similar sacred groves were claimed in the wild, but now based on dissimilar female divinities called *nymphs*. (Kostof) Vecellio Titien's (1488-1576) painting from the Renaissance era, *Nymph and Shepherd* (1576), now at the Kunsthistorisches Museum in Vienna, illustrates the nymph concept beautifully. The grotto's poetics of sacred moisture displayed through immersive space can particularly be traced to the coves dotting the coasts of Greece, such as the dazzling caverns in the Peloponnesus along the bay of Diros. (Miller, N., p. 13)

Inland, the sacred grove came to house what have come to be called *heraea*. A *Heraeum*, in ancient Greece, was a temple sanctuary dedicated to the nymph-Queen Hera. The most important of these was the Argive Heraeum, 8 kilometres north-east (about 5 miles) of Argos, Greece, where Hera's cult was established in around 750 BC. A number of successive temples occupied that site, the last and best known of which was a limestone structure in the Doric order constructed in 423 BC. It housed a famous gold and ivory statue of the Goddess Hera. Other major heraea were at Olympia and Samos in Greece, and at Lacinium near Croton in southern Italy, however only ruins of these sanctuaries survive.

Exactly from where the Greek concept of the abounding sacred sexual nymph stemmed is not known. I assume it is a descendent of the cult of Hathor from North Africa, but why this concept arose there in North Africa, we do not know. Perhaps it is because in most ancient African tribal cultures it is the female who worked the land to produce and pick the fruits of their agricultural labour. (Mack & Picton) African tribal agriculture is the province of the female, and thus the conflation of the fertility of the female and the fertility of plants is well established since the beginning of human time. A hoary example of this conflation is seen in the Paleolithic relief carving called *Venus of the Horn* which was found in the Dordogne and now rests in the Musée d'Aquitaine in Bordeaux. It depicts a curvaceous and corpulent female torso holding what appears to be a horn of plenty in her right hand as she fingers her portly abdomen with her left.

Ostensibly in ceremonial observance of this long fertile tradition there emerged the previously mentioned pudendemic nymphaeum, an ancient Greek secluded area dedicated to the nymphs which typically included an extemporaneous grotto with waterfall or spring, nestled in a grove of trees (or sea cove) with a central

devotional arena. This reminds us again of the Greek temenos, the spot removed from the common land, dedicated, in this case, to nymph Goddesses. The pudendum provides the nymph worshiper a full or semi-encircled sacred immersive space in which to enter into communications with the nymphs, for example with Syrinx, an Arcadian nymph who turned herself into a reed to escape the advances of the shepherd God Pan (depicted in human form with the legs, horns and ears of a goat). Pan, who lived in caves, was son of the nymph Penelope and is thought of as the God of fertility and unbridled male sexuality, known for engaging in sexual activity with various nymphs in the form of a goat. No cave dedicated to Pan and the nymphs is more renowned than the Corcyrian Cave on Mount Parnassus which is celebrated as the site of numerous Bacchic orgies. (Miller, N., p. 15) Yet Pan is not to be confused with *satyrs*, who were Greek woodland spirits. Satyrs had a human upper body and the lower body of a goat and were generally depicted as having dishevelled hair with goat horns and ears, and with an exacerbated erect penis (ithyphallic). In early Greek art they were portrayed as offensive in appearance, but later they were represented as being handsome and sexy. (Thomson) Greek vases occasionally depict post-coital sleeping or sexually active nymphs such as Thetis (who attempted to make Achilles, her son, invulnerable by dipping him in the waters of the river Styx).

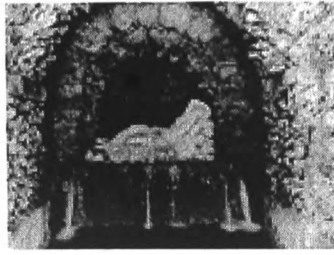
Few places testify more vividly to the development of the grotto than does the cavern rich Bay of Naples. In that the sea-based nymphaeum was incorporated by Roman culture into Italian gardens in the form of small grottoes with fountains or limpid pools of water (Wilkinson & Henderson) it advanced an eventually widespread European garden tradition (as Italy set the model for all early sophisticated European gardens). (Huxley, Anthony) Grottoes in the Italian style generally present a pastoral, semi-nude nymph from Pagan fables (frequently Venus, the Roman adaptation of the Greek Hathor-based Goddess of love and beauty Aphrodite, whose myths she took over) tucked into a niche and accompanied by ferns and spouting or bubbling water. Venus, it must be remembered, was the Roman Goddess of love, originally associated with the biological fecundity of vegetal gardens. Amor, Roman God of love (the equivalent to the Greek Eros) was the son of Venus. Venus's cultural importance rose with the political fortunes of the clan of Julius Caesar (circa 100-44 BC) who claimed descent from Venus via Aeneas and Julia. Indeed Caesar instituted the cult of Venus and proclaimed her as the Goddess of marriage and motherhood, Venus Genetrix; under which name he constructed a temple at the Forum in her honour. Her festival, Veneralia, is celebrated on April 1st. Most people today know of her from the 2nd century BC Hellenistic sculpture *Venus de Milo* which was purchased by France and brought to the Musée du Louvre after her discovery in 1820 on the island of Melos or from Tiziano Vecellio Titian's (1485-1576) 1519 painting *Worship of Venus* at the Museo del Prado.

In classical Greco-Roman times, nymphaea pudendums were widespread in the Mediterranean region and were considered the designated immersive space in which to honour the nymph Muses and to seek philosophical inspiration and cool physical relief and pleasure. A small watery lagoon or languid fountain or soppy ambience is traditionally found in the grotto as a tribute to its origin, the effeminate sacred

nymphaeum of the wooded grove (or sea cove). (Miller, N.) In that the grotto suggests entry into the orifice of ornamented caves, which as we have determined symbolises for many the female reproductive system, we can say that the grotto loosely depicts the idealised female vulva with its semi-encompassing labia (the lips of the vagina). Thus with grottoes there is a ubiquitous and deeply encoded reference to ideas of the female vulva, nymphs, lunar Goddesses, love-making, pleasure and fecundity.

Under the hegemony of the Roman Empire the modest nymphaeum of the Athenian Agora became institutionalised and disseminated as an imposing building decorated throughout with fountains, tufa, shells and female statues. However grottoes in private gardens retained their traditional character as intimate nymphaea-shrines to the Muses. The rotunda nymphaeum, common in the Roman period, was borrowed from such Hellenistic structures as the Great Nymphaeum of Ephesus. Nymphaea existed at Corinth, Antioch, and Constantinople and the remains of about twenty more have been found in Rome (while still others exist as ruins in Asia Minor, Syria, and North Africa). The nymphaeum at Corinth, which is still in (a decayed) existence, represented a transitional type of nymphaea which became incorporated into the Grand Roman fountains.

Later in their tradition, garden grottoes, generally speaking, emerged as an artificial cavern/niche built in a garden or park on or around a natural spring or artificial fountain such as those which came *en vogue* in the 16th and 17th centuries in Europe. But in Roman antiquity there was a distinct contrast between the *natural grotto* (decorated with pumice stone, tufa, and shells and punctuated with sculpture and a diminutive pool of water) and the *architectural grotto* (where interior walls are coated in a mosaic of coloured pebbles, shells and coral in union with frescoes and sculpture). (Elderkin, pp. 125-37) The Grotte of Thetis at Versailles, designed in 1664 for King Louis XIV (1638-1715), represents the epitome of the architectural grotto type. (Girard) This breed of grotto began being built as a folly in England with the 17th century (for example at Woburn Abbey (circa 1630) in Bedfordshire) and flowered in the splendid folly Grotto of the Nymph created in 1748 by John Cheere (1709-1787) at Stourhead, Wiltshire. (Miller, N., pp. 85-87) Also a surviving example of the English grotto from this era can be found at Clifton, near Bristol University. It is a sensationally dazzling grotto (teeming with shells) completed in 1764 for the tradesman Thomas Goldney similar in style to the grotto at St. Giles House near Wimborne which was built by the fourth Earl of Shaftesbury in the mid-1700s to please his wife Susan. (Miller, N., pp. 90-91) But the grandest English folly grotto is the Grotto at Ascot Place in the Royal County of Berkshire. Indeed it is considered by some experts to be the finest in Britain. (Headly & Meulenkamp, p. 215) What astounds the visitor is its well preserved non-institutionally precise elegance.



John Cheere, *Grotto of the Nymph*

The nymphaeum at Hadrian's Villa (AD 134) at Tivoli is regarded as the most famous and influential grotto from Roman antiquity. Also the 1st century BC Temple of the Sibyl at Tivoli, which stands on a ledge of naturally caved rocks which were fitted-out as grottoes, served as a model for a good many of grottoes over time; explicitly for that at the Schloss Schwetzingen at Baden-Württemberg. The Blue Grotto at Capri served as a clear-cut model for the neo-rococo Venus Grotto (1877) at Linderhof of which more will be said in BXIII.

As established, most all of post-renaissance European garden design was massively influenced by the Italian garden and its grotto, for example at Versailles, Karlsruhe, Schönbrunn, Charlottenburg, Nuremberg and Nymphenburg. In the grand garden at the Château de Vaux-le-Vicomte, which was created in 1661 by André Le Nôtre (1613-1700) (designer of Versailles' and Sceaux's gardens) a (what in French is called) *nymphee* is the apex of the vast geometric optical-perspective which defines the garden. (Miller, N., p. 72) Such *nymphees* establish a direct connection with Greek sacred grove nymphaea, as a *nymphee* is by definition an artificial grotto sanctuary dedicated to the nymphs connected with water. However during this period we also see the appearance of grottoes dedicated to male figures, for example the grotto of Apollo and his nine Muses at the Villa Aldobrandini at Frascati (Miller, N., p. 68) and the Hercules Grotto at the Château de Vaux-le-Vicomte.

Clearly the first centre of the spreading fashion for grottoes was Rome, where from the beginning of the 16th century ancient sculptures or architectural elements were placed within sacred natural grotto settings (often in imitation of the grotto to the nymph Egeria). In Italy however, the garden grotto was generally integrated into an overall architectural framework, appearing in niched walls or in hollows dug out of terraced steps. Also they served at times as the obscure entrance of a garden, such as at the 1569 Villa d'Este, Tivoli. Indeed the Villa d'Este provides a host of nymphaea, including the inventive Oval Grotto and the interior Sleeping Venus Grotto. (Coffin) However the original conceptual focus of the villa's various grottoes was a corpulent dryad of breast milk: Diane of Espheusus, a 16th century sculptural copy modelled on the classical *Artémis from Ephese*. (Miller, N., pp. 45-47) Also grottoes might appear as part of a building; such as at the Appartamento della Grotta at the Palazzo del Te, Mantua. (Turner, J.)



Artémis from Ephese

By the mid-16th century, almost every large garden in Europe, every cognoscenti, had a grotto. In that century there evolved the autonomous *pavilion grotto* in France, a detached diminutive fabrication coated in tufa (e.g., Noisy-le-Roy (1599)) and this form, less the tufa, became widely adapted in Germanic culture, for example at the Orpheus Grotto at Schloss Hellbrunn. Also in France during this time there developed a *grotto-hill*; an artificial hill constructed to hold the grotto (Elderkin) (reminiscent of Newgrange in many respects) which was followed by a *grotto-basin*; a grotto-fountain arrangement such as the one we can still see in the garden of Versailles in the 17th century *Basin of the Nymphs of Diana*. An example of the grotto-hill construction is the Hermitage at Gaillon which was built in 1560 but sadly destroyed in 1798. The ceramist Bernard Palissy (1510-1589) left us a written dissertation from the era which describes grotto-hills created on artificially created lakes containing interior rooms lined with gleaming glazed terra-cotta. Ceramic mosaics were used a good deal during this period for such effects. For example the grotto in the Tuileries garden was so brightly glazed that the interior shimmered with an iridescent shine.

The history of semi-immersive shrines to Venus (which crop up throughout European cultural history) is one of increasingly isolated and solidly constructed versions of the nymphaeum's spatial and ideological format. For example the natural caverns along the Tyrrhenian Sea were imitated and transformed into elegant, cool chambers for Roman villas, such as the Sperlonga caverns (only discovered in 1957) which are believed to have been part of the 1st century villa of Emperor Tiberius (BC 42-37 AD). (Wilkinson & Henderson) This Roman grotto, which surrounded a serene pool of sea water in homage to Venus, was finely stuccoed,

painted, and inlaid with seashells. Hellenistic grottoes of the 3rd century BC often were semi-circular fountain types, such as those found at Pompeii and Herculaneum, for example the nymphaeum in the House of Neptune in Herculaneum. It is known that the grotto of the nymph Egeria in the villa of Herod Atticus (circa AD 215), which was situated on private land, was one of the most frequently visited shrines in Rome. (Turner, J.) Owing to its good state of preservation, its slumbering nymph became an influential model during the Renaissance.

When one speaks of the Renaissance one speaks, by and large, of an Early-Renaissance (late-15th century), a High-Renaissance (1500-1530), and a Late-Renaissance Mannerism (second and third quarters of the 16th century). With the High-Renaissance's unearthing of classical Greco-Roman culture as a direct result of excavations executed in the 15th and 16th centuries (for example the nymphaeum at Albano) nymphaea inspired grottoes became even more widespread, crossing the entire span of Europe and often taking on idiosyncrasies connected with magic, alchemy, and later with the Christian Virgin Mary. As early as 1511 the nymphaeum found its successor in the Genazzano (Lazio), which is attributed to Donato Bramante (1444-1514). The Fonte Basso at the Villa Giulia in Rome (1555), by Bartolomeo Ammanni (1511-1592), stems from the same tradition. From the 1530s on, there was, however, a change in emphasis towards the mannerist imagination, with, for example, the Grotta degli Animali in the Medici villa at Castello (1575) by Niccolò Tribolo (1500-1550).

Mannerism (generally the art of the period of Late-Renaissance circa 1530-1600) was an aesthetic movement that valued highly refined gracefulness and elegance; a beautiful *maniera* (style) from which Mannerism takes its name. The term usually means an art in which lavish attention is paid to stylisation and to the superficialities of semblance. Hence a mannerist work will be anti-naturalistic, often with elongated figures and/or unaccustomed colors and rather intricate in composition. It often dealt with themes of religious abandon as exemplified by the paintings of El Greco (1541-1614), specifically his 1595 painting entitled *Resurrection* which I saw at the Museo del Prado in Madrid.

It is enticing to note here that during this mannerist period (in 1553) Giovanni Battista della Porta (1538-1615) published details for the construction and use of the *camera obscura* (Latin for *dark room*). As an artistic visualisation mechanism, the camera obscura consists of a darkened box (into which the artist climbs) with a small aperture in one wall through which light passes, projecting an inverted image onto the opposite wall. For his efforts Battista was later brought to court on charges of sorcery. Regardless, the invention of the camera obscura excited interest in the mechanism (mechanical model) of the human eye. Hence both seeing and depicting were viewed more narrowly as the camera obscura "necessarily defines an observer as isolated, enclosed, and autonomous within its dark confines". (Crary, 1994, p. 39) According to Jonathan Crary, it

was in the late-1500s when the camera obscura begins to assume a "preeminent importance in delimiting and defining the relations between observer and the world". (Crary, 1994, p. 38)

Leonardo da Vinci (1452-1519), painter of the grottoesque canvas *La Vierge aux Rochers* (The Virgin with Boulders), had previously written about the principles of the camera obscura following 10th century theories of the Arabian scholar Hassan ibn Hassan (although even as far back as the 5th century BC various Greek philosophers described the optical principles of the camera obscura and its working principle: a dark box or room with a hole in one end where if the hole was small enough, an inverted image would be seen on the opposite side). According again to Crary, "what is crucial about the camera obscura is its relation to the observer to the undemarcated, undifferentiated expanse of the world outside, and how its apparatus makes an orderly cut or delineation of that field...". (Crary, 1994, p. 34)

Inside of a few decades, the camera obscura was no longer one of many instruments or visual options, but instead "the compulsory site from which vision can be conceived or represented" as it indicated "the appearance of a new model of subjectivity, the hegemony of a new subject-effect". (Crary, 1994, p. 38) Concerning this burgeoning scopic regime of the camera obscura, Crary moreover writes that one must however "be wary of conflating the meaning and effects of the camera obscura and the techniques of linear perspective. Obviously the two are related, but it must be stressed that the camera obscura defines the position of an interiorised observer to an exterior world, not just to a two-dimensional representation, as is the case with perspective. Thus the camera obscura is synonymous with a much broader kind of subject-effect; it is about far more than a relation of an observer to a certain procedure of picture making." (Crary, 1994, p. 34)

Later more sophisticated camera obscura models added lenses to the aperture, increasing its affinity to the human eye. Its strength as an aid to drawing resides in its ability to reduce onto a flat surface the complex holonomic visual information which fully enters the eye. It was much used by topographical painters who focused on the mapping of a view. A sub-genre of topographical painting is panorama painting.

Scott Wilcox in *The Dictionary of Art* tells us that the name *panorama* is bestowed upon several forms of large-scale pictorial displays which enjoyed widespread popularity in the 19th and 20th centuries. The term was applied to artificial installations which utilised a 360° view of a landscape or cityscape which was painted on the inside of a large cylinder and viewed from a platform at the cylinder's centre. This mode of optic display was officially invented and patented by Robert Barker (1739-1806), an Irish artist who lived and worked in Edinburgh. (Turner, J.) Barker first exhibited his invention in 1787 in Edinburgh and in London in 1788. These presentations were considerably well received by the public (the audience is immediately surrounded on all sides by a three-dimensional interior) and their success enabled Barker to open a permanent

rotunda for the exhibition of his panorama in London in 1793, the Leicester Square Panorama, which operated continuously for seventy years.

The original name for the panorama was the French term *la nature à coup d'oeil* but in advertisements for its exhibition in London in 1791 Barker adapted the term *panorama*, which derives from the Greek words for *all* and *view*. This choice of words (all-view) indicates to me that what was strived for was an attempt at a total-view reminiscent of the omni-perspectivist ideal I discussed in AII. Prior to Barker's achievement several antecedents were put forth in Britain however. In 1777 Thomas Hearne (1744-1817) produced a sketch of Derwentwater 6.1 metres long (approximately 20 feet) for George Barret (circa 1732-1784) who intended to have the scene painted on the walls of a circular banquet room and in 1781 George Barret painted the walls of a room at Norbury Park (Surrey) with a continuous vista of the Cumberland Hills.

Ensuuing Barker, Louis-Jacques Daguerre (1787-1851), inventor of the daguerreotype, together with the architect/painter Charles-Marie Bouton (1781-1853) created the *diorama* in 1822. Like the panorama, the diorama was an attempt to recreate the appearance of 360° nature by means of painting and the mechanical regulation of light. The diorama consisted of a delicate cloth measuring about 14 by 22 metres (approximately 46 by 72 feet) painted with landscapes in a manner of the idyllic sublime. (Gernsheim & Gernsheim) The audience sat in near-darkness as the picture was shown by means of daylight admitted through the windows concealed both above the spectators and behind the painting by a system of shutters and coloured filtering screens. They were first shown at the Paris *Diorama* that the two men constructed (seating 350 people) at the Place de la République which opened July 11th, 1822. On September 29th, 1823 the partners opened a second *Diorama* (seating 200) which could show two dioramas in succession by rotating the audience 73° in London's Regent's Park. The Diorama also made a tour of Britain and the east coast of America. (Gernsheim & Gernsheim)

Getting back to grottoes, in 1584 Bernardo Buontalenti installed a grotesque grotto at the Medici villa of Pratolina which was famous for its water-driven mechanical automata. The *Grotesque* (in Italian *Grottoresco*) became an arabesque style of all-over decoration based on a linked *mêlée* of fantastic diminutive figures deriving from Roman mural and vault decoration which had been unearthed during the Renaissance (such as at the Golden House of Nero); mural decorations which themselves suggested ancient expressions of religio-sexual inter-penetrability. (Kayse) This fanciful imagery involved mixing animal, human, and plant forms together. First revived in the Renaissance by the school of Raphaël Sanzio (1483-1520) in Rome, the Grotesque quickly came into fashion in 16th-century Italy and subsequently became popular throughout Europe.



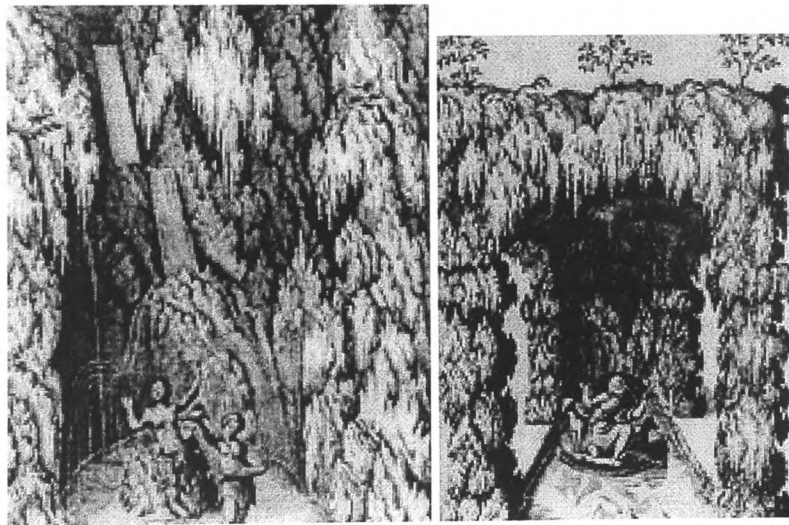
typical 16th century Grottesque design

Mannerist renaissance grottoes were placed in various locations; in the ground floor of buildings, as separate stand-alone structures or tucked under terraces. In style the mannerist Grottesque is deliberately anti-actual, often including elaborate depictions of multiple figures bound in tendrils. Mannerist interior decorators esteemed the style inasmuch as it was suitably hoary in derivation, whimsical and playfully erotic, and, most importantly from this studies perspective, capable, due to its all-over field approach, of fitting any required expanse because it had no solitary subject-matter and hence *no central focus*. (Kayse) Many late-renaissance grottoes were decorated in just such a grotesque syncretistic fashion, but moisture was always present, just as it is always present within the roundness of every enceinte mother's womb. Grottesque grottoes were created in a variety of extravagant shapes, but all were dedicated to the impulses of sex and love. (Miller, N. pp. 43-44) Often the inside simulated an underwater cavern, replete with a mosaic coating of opened sea-shells suggestive of female genitalia. As Miller explains in *Heavenly Caves: Reflections on the Garden Grotto*, grottoes represented the reverse side of renaissance rationality by introducing into the ordered garden space of the formal garden a niche dedicated to the irrational realm of the mystic world in which rationalist rules need not apply. (Miller, N. p. 53) It is this aspect of the grotto which is the most relevant characteristic in formulating comparisons to VE's immersive space.

This anti-rationality of the grottoes became an integral part of the mannerist pleasure garden, and their suggestive pursuit of sexual pleasure became encoded into the metaphysical content of the garden. Clearly mannerist grottoes were meant to evoke the antithesis between nature and art and the Dionysian and the

Apollonian realms. (Elderkin) The Dionysian nature was represented by the grotto itself while the well-ordered formal garden represented Apollonian framing-order typical of the Renaissance.

All through Europe large grotto sites were laid out in the 16th century and early-17th century, such as Thomas Francini's (1571-1651) Pratolino at Saint-Germain-en-Laye's (1600) and the mannerist grotto site (lamentably lost to us except through the detailed drawings) of Saloman de Caus (1576-1626) (the garden's 1619 creator) which are found in his 1620 book *Le Jardin Palatin: Hortus Palatinus*. (de Caus) Saloman de Caus fabricated sumptuous grounds for the Schloss in Heidelberg in Italian late-renaissance style, similar to those at Meudon and St. Germain-en-Laye, replete with a number of lavish flora, water, rock, shell, and even coral grottoes, the largest measuring 21 by 9.6 metres (70 by 32 feet) in scale. (Strong, 1979, pp. 73-112) Saloman de Caus's younger brother, or son, or nephew (it is not known which) Isaac de Caus (?-1655) continued Saloman's grotto work in both theory and practice, most notably at the existent shell grotto at Woburn Abbey in Bedfordshire, England, created in 1627. Elaborate arabesque patterns of sea shells in concentric rows form the ribs of the vaulted ceiling and the arched niches. (Miller, N., p. 65) Also in 1624 he had contrived a grotto at the Banqueting House in London.

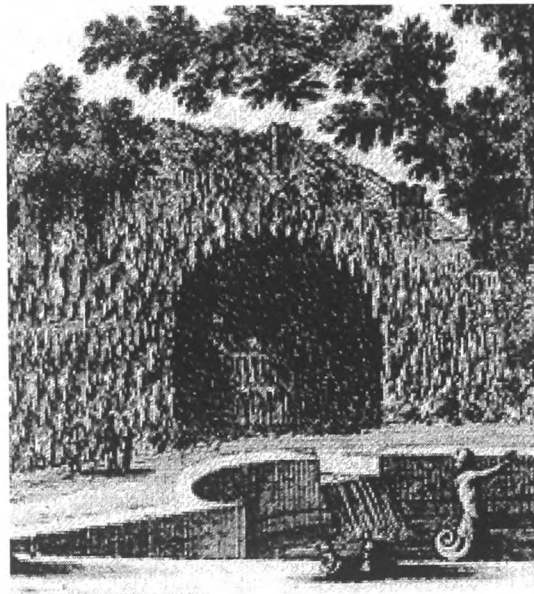


Saloman de Caus, drawings for grottoes in *Le Jardin Palatin: Hortus Palatinus*

The spectacular characteristic of the Renaissance's Villa Orsini Bomarzo (1552-1580) Sacred Grove of Bomarzo is another good example of myth-based immersive fabricating. In this pleasure garden extraordinaire, the *sacro bosco* (sacred woods) are scattered with colossal sculptures and grottoes which recount the yarn (derived from a popular publication in 16th century Italian literature) of the lunatic Orlando and his trials and tribulations in love and strife.

By contrast, the interior grotto had a great reception in France, starting even with the regime of King François I (1494-1547). For our purposes, its importance resides in the fact that the interior grotto inspired the fully immersive attributes of the rococo rocaille style.

Rocaille is the French word meaning *rock-work*, which became the term of use when describing a type of 16th century ornamental decoration evocative of the superannuated cavern. Typically rocaille work resembled or suggested the irregular edges and texture of porous craggy rocks (recalling the cave), and/or coral and shells (recalling the cove). The motif was used widely in the 16th century in the creation of interior grottoes, which, as I have suggested, were meant to imitate the rocky formation of archaic caves and thereby invoked their encoded immersive significance. Rocaille had originally referred to the shell-work employed in exterior garden grottoes, but as of 1736 the term began to be used to designate a total, over-all design for the indoors. (Miller, N., p. 101)

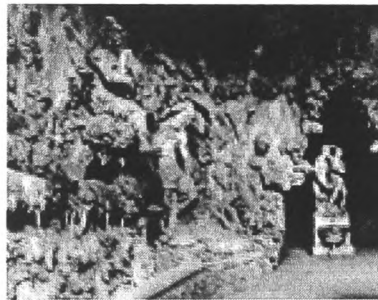


1638 rocaille style grotto drawing from Ruel

Additionally for the mannerist mind the interior grotto represented the strained alliance between nature and culture, a strain articulated through the idea of the *construction of nature*, which really represented the *apotheosis of the artificial*. (Negrotti) Outside, some garden grottoes from this era were created with rocky, seemingly natural, façades which concealed cleverly an indulgently opulent interior. For example there was a mannerist adaptation of the grotto which simulated ruin and decay at the Schloss Hellbrunn in Salzburg created in 1615 by Santino Solari (1576-1646) as part of an elaborate surrounding garden (including the Neptune Grotto) laced with iconographical models based on neo-Platonic ideals (as was the case with the Pratolina and the Hortus Palatinus). Francesco Primaticcio's (1504-1570) Grotte du Jardin des Pins (1543) at Fontainebleau exemplifies similar Italian mannerist influence in its deliberate *non finito* (unfinished) quality.

There also developed a more mannerist sea inspired version of the grotto such as the Grotta Pavese at the Villa Doria alle Madre Franzoniane created in 1594 in Genoa, the garden grotto at Château Nassau d'Idstein, and Friedrich Sustris's (1540-1599) extraordinarily 1586 mannerist Grottenhof at the Residenz in Munich.

Around the same time the architect Galeazzo Alessi (1512-1572) and his followers in northern Italy were producing grottoes in the more classically restrained style, for example at the Villa Pallavicino della Peschiere. However in many grotto projects of the era there was room for experimentation, such as at the Mirror Grotto at Schloss Hellbrunn where mirrors were used to replace and suggest still water. (Miller, N., p. 113) The mirror became used widely in this respect. In the Boboli gardens in Florence, particularly in the Grotta Grande created in 1585 by the artist/architect Bernardo Buontalenti (1536-1608), the grotto form reached certain mannerist heights of artificiality. The painter of the great Sistine Chapel immersive fresco *The Last Judgement* (1541) Michelangelo Buonarroti's (1475-1564) sculpture *Slaves* (circa 1523) was displayed in the Grotto Grande after 1585 for a time. Indeed one imagines that the *non finito* character of these sculptures harmonised splendidly with the rough-hewn, sponge-like, qualities of the grotto and its cupola in the construction of a gesamtkunstwerkesque efficacy. Also the Boboli's 1555 Grotticina di Madama experimented with combining the 'natural' and the 'architectural' type of grotto.



Grotticina di Madama

The 18th century was both an age of reason and pleasure as the general Pan-European enthusiasm for classical antiquity encouraged the reappraisal and readaption of the Pagan grotto redirected towards romantic ideological ends (i.e., a nostalgia for the antiquated past embellished with a sublime tingle of fear so as to yield a heightened sublime feeling much prized by the romantic mind for its poetic and metaphysical merit). (McGann) One might here allude to Charles Bridgeman's (?-1738) Dido Grotto at Stowe, begun in 1713, in this respect. (Miller, N., pp. 79-80) Moreover the 4' 6" hunchback poet and philosopher Alexander Pope (1688-1744) in 1718 built a private grotto at his manor in Twickenham, on the banks of the Thames, in which he could retreat from the world into a space of dedication to the Muses. (Miller, N., pp. 81-84) Sadly it has been substantially pilfered.

In Germany a reinterest in the grotto blossomed as part of the general Gothic revival which itself was inspired by romantic neo-Platonic ideals. (Schenk) The earliest example of this tendency is to be found at the grotesque Magdalenenkluse which was created in 1728 by Joseph Effner (1687-1745) at the Schloss Nymphenburg in Munich (the birthplace of Ludwig II of Bavaria, creator of the proto-décadent Venus Grotto at Linderhof).



1877 drawing of Ludwig II's *Venus Grotto*

The baroque interior grotto shared with the Baroque era the following characteristics: the expansion of a precise formal visual idea, a taste for astonishment and special effects, the inflation of form, and an excessively self-confident premeditation. (Bazin. G., 1988, p. 163) In the early half of the 18th century, when the impact of the Baroque could still be felt, an independent type of grotto architecture came into being in Germany whereby the grotto was associated with a garden green-room. Sea shells and glistening minerals combined with painted frescos and stucco is typical of this trend. *Stucco* is created when dehydrated lime is mixed with marble dust and glue and formed into palpable forms. The technique, which goes back to the Egyptians, was immensely popular in Hellenistic and Roman times and, by this very token, enthusiastically revived during the Renaissance, perhaps peaking during the Rococo in France and southern Germany. There was also in Germany a rococo rocaille style of grotto architecture which emerged in the form of a grotto pavilion. It differed from the French pavilion grotto in being richly decorated in shells and pebbles outside as well as in. Examples are to be found at the grotto pavilion in the garden at Falkenlust and the Great Grotto Hall in the Neues Palais at Potsdam, built in 1769. Also one might point out the late-18th century Neptune Grotto at Sanssouci (also in Potsdam) and the Belvedere Grottoes at Veitshöchheim, Bavaria (1773).



Hubert Robert, *Laiterie de la Reine* nymphée

18th century French nymphées linked in certain instances directly to the theme of fertile female reproductionability and the female breast (and its understood psychic onement) with the dairy and its milk production. The French painter Hubert Robert (1733-1808), for example, constructed at Château Rambouillet in 1788 the Queen's Dairy (*la Laiterie de la Reine*) which featured a nymphée in a neo-classical mode. (Miller, N., pp. 95-96) A related grotto was constructed at the dairy at Méréville. Indeed nymphées were constructed relatively frequently and in a variety of settings in the 18th century, such as the architect Germain Soufflot's (1713-1780) 1774 Nymphaeum (inspired by the ruins at Herculaneum) at Chatou, a village located on the banks of the Seine River. Soufflot also designed a small but ravishing nymphée in 1771 at Ménars. (Miller, N., p. 96) François-Joseph Bélanger (1744-1818) also fabricated an eccentric, hybrid, cave-like neo-classical nymphée in circa 1780 at Neuilly-sur-Seine called *La Folie de St. James*, indicative of the late-18th century shift in taste from the profusive Rococo towards an austere Neo-Classicism. (Gombrich, 1979, pp. 30-31) A century later under Napoléon III (1808-1873) Baron Georges Haussmann (1809-1891) erected a nymphée grotto at what he took to be the source of the Seine River. The source had been identified 40 kilometres (about 2.5 miles) north-east of Dijon where a 2nd century AD Gallo-Roman temple dedicated to the nymph Sequana was unearthed in the year 1838. In the ruins of the temple was found an even older small bronze sculpture of a voluptuous female from the 1st century. This archaeological evidence has been transferred to the Musée Archéologique of Dijon and the area (a sacred spot where people have come for centuries in search of fertility and relief from their woes) has been sealed off from the public. In its place Haussmann commissioned the sculptor François Jouffroy (1806-1882) to construct a nymphée in the year 1868.

During this late-18th century period, French taste at times determined that grottoes be rustic both inside and out so as to metaphysically refer to the qualities of antique nymphaea. However no matter what the period

style, always in garden grottoes there is a contrast between the harsh, bright, hot sunlight reality and the cooling, dreamy, semi-darkness of lunar otherworldliness.

By the 19th century neo-grotesque ornament was frequently featured in Anglo-Saxon renaissance revival interiors, such as those at Chatsworth, Derbyshire, Longleat, and Wiltshire created by the Crace family of decorators, and the nymph/grotto tradition can be seen periodically in the 20th century as well. In the mid-20th century there was completed the eccentric grotto complex of Clarence Schmidt (1897-1978) whose life-work was the formation of a cession of grottoes, faux caves and a House of Mirrors near Woodstock, New York (now destroyed). (Schuyt, Elffers & Collins, pp. 201-202)



Clarence Schmidt, *Grotto*

More recently, on January, 20, 1998 I saw the Spring *haute couture* fashion show of Christian Lacroix entitled *Que votre volonté soit fée* held at the Grand Hôtel in Paris. It took place on a stage decorated to appear as a facetious forest grove and the clothing and accessories, dripping with elaborate finery, made the beautiful bucolic models appear as if they were flitting fairies (nymphs with wings); diminutive, dubious, debonair celebrants of nature, most probably inspired by the same show I saw of *Victorian Fairy Painting* which was held at the Royal Academy of London in late-1997/early-1998.

The school of British fairy painting on which Lacroix apparently based his Spring collection stemmed from the late-18th century works of Henry Fuseli (1741-1825) who established the basic vocabulary of the fairy/nymph *genre* in painting. (Tomory). Fuseli used William Shakespeare's (1564-1616) fairy play *Midsummer Night's Dream* as the initial inspiration for far-fetched fantasy scenes that immersed mannerist-derived nude figures into a maelstrom of incubusian incidents. William Blake (1757-1827) also incorporated fairy imagery into his non-conventional cosmos. For example, in his *Oberon, Titania, and Puck with Fairies*

Dancing (1785) Blake depicts a fairy emperor and his queen/consort presiding over a *fairy ring*. During the epoch of Romanticism the artists Henry Singleton (1766-1839), Henry Howard (1769-1847), Frank Howard (1805-1866), and Joshua Cristall (1767-1847) all carried on the tradition in small-scaled fairy works. Francis Danby (1793-1861) painted *The Wood-Nymph's Hymn to the Rising Sun* (1845) and earlier two water-colour versions of *Scene from a Midsummer Night's Dream* (1832) containing a view of fairy affairs daintily being enacted in a dew-drenched amphitheatre. This is most enticing for our concerns, as the dramatic panoramic sites where the Greeks built sunken bowl-like amphitheatres (for example at Akrai and Dodoni where the theatre's shape echoes the basin between the surrounding hills) is most probably a descendent of the moist Mesopotamian sacred garden-groves cum nymphaea. (Brookes)

Daniel Maclise (1806-1870) exemplified the nymph heritage with his 1832 painting *The Disenchantment of Bottom*, a depiction of an ominously frisky fairy-ring of sprites dancing circuitously about a central (omphalos) toadstool. Following Maclise is the now recognised school of Victorian fairy painting, a school which had as their spirited admirers such luminaries as Lewis Carroll (1832-1898), William Makepeace Thackeray (1811-1863), Charles Dickens (1812-1870), Queen Victoria (1819-1901), and the previously mentioned John Ruskin, who gave widely a lecture called "Fairy Land" in the early-1880s.

The term *Victorian* literally describes the reign of Queen Victoria which spanned the years 1837 to 1901. The Victorian aesthetic is exemplified by its extremely ornate and cluttered interiors as shown at the 1851 Crystal Palace exhibition. Under Queen Victoria, fairy paintings appeared systematically in Royal Academy exhibitions (replete at times with their soft dreamy erotic imagery) throughout the 19th century; exhibitions which included works by John Simmons (1823-1876), John Atkinson Grimshaw (1836-1893) and John Anster Fitzgerald (1819-1906). (Schindler) Fitzgerald's 24.8 by 29.7 centimetre (approximately 9.6 by 11.6 inch) painting entitled *The Captive Robin* depicts an embellished nymph-fairy group tucked into their own enchanted fairy niche, hovering over and nurturing an appropriated egg/grape. By contrast, Simmons and Grimshaw presented forthrightly amatory works, usually emphasising a lone denuded dame enclosed in a natural grotto, commonly encircled by a frail fairy forum (as in the Fitzgerald). In some of these works, the inclusion of a toadstool adds a phallic/hallucinogenic enumeration to the amatory subtlety.



John Anster Fitzgerald, *The Captive Robin*

J. M. W. Turner also painted his versions of fairyland, however the style, for the most part, transferred into the area of illustration following the Victorian period. Nevertheless the subject never fully dies. In 1922, the Russian designer El (Eliezer Markovich) Lazar Lissitzky (1890-1941) designed a book which used Suprematist imagery to tell a socialist fairy tale. Witness too the 1978 painting *Titania* by the British Pop artist Peter Blake, for example; a painting which updates the fairy/nymph scenario by making an explicit intimacy between naked women and their surrounding scenery through the ornamentation of the Fairy Queen's bare breasts and genitalia with flowers, stems, and pasture stalks in recollection of ancient Greek agrarian sacred/sexual jubilations. It even appears now in publicity as evidenced by the current 1998 Lolita Lempicka perfume advertising campaign.

But we shall turn now to the source of this tradition in the ancient past to grasp a better understanding of what the fairy/nymph's sacred grove engendered in terms of immersive art.



Akrai

In ancient polytheistic Greece, sacred rites were in certain cases enacted on or near sacred grove sites. One such well recorded rite was the ecstatic Dionysian rite. The Dionysian rite was directed not to the nymphs however, but to Dionysos (also known as Dionysius, Bacchus and/or Bakchos), the God of wine,

intoxication and creative ekstasis. Dionysian ecstatic festivities were based however on an even earlier form of ritual; the ancient Springtime Spree which was a three day agricultural gala which involved the uncasking and drinking of that year's wine, the planting of seeds, and the encountering of ghosts. (Harrison, p. 80) By intoxicatingly mixing seeds with memories of their dead in the earth (which was viewed as the domain of the deceased) the ancient Greeks were able to incorporate their departed into the drinking and planting festival of the Spring Dionysia.

Subsequently the Spring Spree evolved into the even more intense rite of Dionysian ekstasis which intensified consciousness through drink and ecstatic prancing. The culmination of the Dionysian ekstasis rite was an ecstatic frenzy in which the dancers tore apart and devoured raw a sacrificial animal such as a goat or a fawn. At the centre of the rite are the mental states of *ek-stasis* and *en-thusiasmós*, states where psychological frontiers are torn down in preparation for the immersive divine dive into a world of animalistic unity (somewhat reminiscent of what I had felt inside Lascaux). The rite was seen as a communion with Dionysius in that the worshiper consumed a part of raw nature which was identified with Dionysius himself. (Faas) In like sacred manner, the semi-nomadic Masai people of Africa still today take to the volcanic mountain of Ol Doinyo Lengai a chosen goat to sacrifice to their God Enk-ai and the men drink the goat's fresh blood.

What is important to immersive theory is that the character of the thrice sacred impulse of the ancient agricultural Springtime Spree of drinking, planting and encountering ghosts is that from it the classical Greek chorus drew its associative power. The Greek chorus is a remnant left over from the above mentioned ritual forms, in which all male community members participated freely, for which Jane Harrison uses the terminology *dromenon* (the thing done). (Harrison, p. 64) This ritual action turned communicative presentation is consistent with what Emmanuel Levinas, in *Totality and Infinity*, says is the basis of the social relations: free gift-giving (so that referents can be held in joint to crystallise their communicative reciprocity). (Levinas, pp. 72-77) But what is most significant to immersive theory is the circular *orchestra*, the space on which the chorus freely sang and danced. The relationship of that circle to eventual spectators shall illuminate just how art arose out of immersive ecstatic ritual and framed itself in non-immersive terms in the West. One must remember that the tragic dramas of the poets Aeschylus (525-456 BC), Sophocles (495-406 BC), and even Euripides (480-406 BC), it is thought, were played not upon the theatre stage but within the circular orchestra; a circular orchestra which marked out the sacred patch of the Gods and Goddesses.

Originally a tragic drama in Greece consisted of a single actor and a large chorus which suggests that tragic drama began as a choral celebration in memory of a dead hero (a replacement for the fawn or goat) in which someone, probably the leader of the chorus, at some point began to act out the exploits of the person being celebrated (after being symbolically eaten). In roughly 550 BC, the Greek Classical age began with

Aeschylus, a notable participant in Athens's major dramatic competition, the Great Dionysia, a part of the festival of Dionysos. Aeschylus's influence on the development of tragedy was fundamental in that previous to him Greek drama was limited to this one actor and the chorus. Aristotle tells us that Aeschylus was the first to introduce a second actor. Aeschylus's tragic production work was followed by that of Sophocles, work typified by tragic reasoned thought and polished phrasing. Aristotle tells us that Sophocles was the first to introduce a third actor into the tragedy. Sophocles's work was followed by that of Euripides, the tragic poet who is most responsible for severing the chorus from the action of the play. Aristotle tells us that by Euripides' time it is clear that the number of main actors has increased and the importance of the chorus decreased. (Decharme) Euripides's work also interests us in that he was predominantly an investigator into intense viractual conceptions. A relevant example of Euripides's work, which was brought to my attention for its viractual importance by Miranda Aldhouse Green, was Euripides's play *Bacchae*, the last and greatest work of Euripides. Through briefly looking at this play I hope to show something of the viractual nature of Greek tragic dramas as they were experienced by the Athenians at the Great Festival of Tragic Drama, an annual religious festival in honour of the God Dionysius. (Parke)



Dionysius Theatre

The *Bacchae*, which is given narration by the chorus (who in this case consists of female worshipers (played by masked men) of Dionysius called *Bacchae*, a name derived from *Bacchus*, the Lydian name for Dionysius) tells the story of Dionysius, the Greek God of wine, revelry and of nature in all of its organic and bestial prodigality. The *Bacchae* refers to a group of *maenads* caught in Dionysius' Bacchic frenzy, whipped up by the exacerbating attractive enchantments of Dionysius.

In the *Bacchae*, Dionysian ritual is consistently connected with exultation and liberation as the chorus sings of the raptures of Dionysian bliss. Such Dionysian worship was only one of the mystery cults which flourished in ancient Greece however, the most widely known being Eleusis and the Eleusinian Mysteries. (Mylonas) The word *mystery* here refers to the fact that these cults required that their rites be kept secret from outsiders. Most scholars believe, on the basis of testimony from Clement of Alexandria and Tertullian, that the Greek Mysteries were comprised of three main components: the *deiknymena* (things shown), the *legomena* (things said), and the *dromena* (things done). (Burkert)

In the play, by enflaming the Bacchae, Dionysius deliberately rouses the anger of the disrespectful but authoritative youthful King of Thebes, *Pentheus*, who vows to put a halt to the Dionysian orgies (the Greeks called the rites of mystery cults *orgia* (i.e., orgies)). Enraged by Pentheus's refusal to accept his ecstatic authority, Dionysius whips the women of Thebes into a deranged and furious delirium as to castigate Pentheus's impertinence.

The play's course covers attempts by Pentheus to dissolve the tenacity of Dionysius's necromancy and his eventual humiliating demise at the hands of Dionysius when the disguised Dionysius shrewdly causes Pentheus to challenge (and ultimately relent to) the full force of his powers. By so doing he compels the King towards his own destruction, notwithstanding efforts made by his grandfather Cadmus and an eyeless augur, Tiresias, to discourage Pentheus from his agenda. Dionysius deludes Pentheus by making the King see him as a bull, to think that the palace was in flames, and to think that a phantom Dionysius, which the King was trying to stab, was the God himself. Dionysius appears at the end of a tragedy as *a deus ex machina* (God from the machine). (Decharme)

The orchestra in which this work and others first were played consisted merely of a circular plot beaten flat and sometimes edged by a stone periphery. This is perhaps best seen today at the Epidauros Theatre where the circle is now surrounded by a *theatron* (the spectators place) which was subsequently added on. The theatre, for the Greeks, was simply *the place of seeing*, (where the spectators sat) and the *scene* (or *skene*) was a hut or tent in which the actors dressed. (Harrison, p. 65) The central focal point of the whole was the *orchestra*, the circular dancing/playing/singing arena for the chorus of men to perform their tragic dithyramb in. It is from this active arena where the ideal (an ideal ironically for both the totality of the *gesamtkunstwerk* and for non-art) of the non-differentiation between artist and non-artist, between art and life, between various art disciplines, and between the final work of art and the spectators, originated in the West. All these impulses stem from the group revelry taking place in an immersive sacred circle which sprung from the hoary shrine. It is this relationship between the space of the chorus and the space of the spectator where we can observe, with the shifts of time, the emergence of art from its roots in participatory ritual; the move from *dromenon* to drama.

The space is circular because its quintessence is the, heretofore mentioned, circular arrangement of stones on the ground which procured a sense of fervent sanctity in which the undifferentiating dance-rite revolved around some sacred/sexual focal point at the circle's centre. As previously outlined, this centre point (*omphalos*) represented the place where heaven joined with the earth and where communications with the Gods and Goddesses was made possible. It is from this metaphysical hoop's *omphalos* that occult perception generally looked inward at cocooned inner immersive space and outward towards an expanding immersive space of the vast cosmos. (Karatani) At first this point was marked by bundled stalks of reaped oats which sat

in the centre of the circle and only later became a stylised male phallus or female pudendum or the figure of a *homo erectus* God or Goddess, and then still later their extra-representational maypole or alter. This sacred centring point of encircling immersive space reflected the community member's believed centred place in the cosmos.

In the circular space of the proto-orchestra circle the entire licit Greek male society would gather and circuitously rotate ardently around the omphalos cum stave. (Harrison, p. 66) There is no division at first between actor and spectator as all Greek men participated in the dance-worship with its consolidated emotion. This, of course, is reminiscent of what Brenda Laurel argues is the case with VR's immersive interface. She points out in her book *Computers as Theatre* that VR resembles just this kind of unity between theatre and audience where the audience members becomes a part of the action. (Laurel, 1991) In any respect, the amphitheatre seating, which we know well today, developed when the Greeks moved the omphalos based sacred orchestra circle up against the side of a slopping hill so that those excluded but watching (the uninitiated, the women and the children) would have an unobstructed view of the Dionysian festival. The Theatre of Dionysos at the Acropolis is a chief example.

With this new arrangement more and more uninitiated people would gather to watch the ceremony and it is precisely at this period where the Dionysian ritual, the thing actually done, turns into the abstraction of art, and into show. *Thus the bulk of Western art as it has been conceived for about 2,400 years begins with the demise of immersive participation and the advent of passive contemplation* through the watching of something prepared worthy of attending. Now the holonetric eye has been removed from the action of the rite and separated from the whole and placed at rest, aloof and detached through distance by the mounting stone seats which semi-circle the spherical omphalos-based orchestra pit. (Demargne)

What an emphasis on aesthetic immersion does, is to replace the severed eye back into the ritual position by dragging it down into the felt 360° omni-perspective of the enthusiastic and participatory. It is through just such holonogic-visual procedures (whether corporeal or conceptual) that immersive cognition excels past representation.

Thus through the non-holonogic, non-participatory severed eye, the rounded holonogic-visual procedure which complimented and facilitated the unkempt activities of the Dionysian ritual, eventually gave way to the ordered, linear, theatrical framing-box organisation of artistic vision due, paradoxically enough, to acoustical considerations, when the revelry ceased and the choral staged presentations began. (Mitchell, W. J., p. 60) We shall see nevertheless how this sacred, circular, visually-holonogic form of the omphalos-based (sacred circle) orchestra pit is maintained throughout the history of immersive space through sacred vaulting and doming

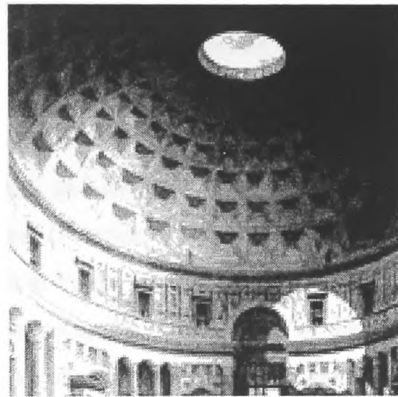
architectural achievements beginning with the geometry of the niched and domed Persian and Greek temples. Hence we have arrived at a solidified rendering of sacred nymphaea and sacred circles.

Sacred circle inspired shaped architecture directly moulds visual-cognitive responses by not cutting holonomic vision on the way to the intellect. (Savile, 1988, p. 180) Savile's sacred circle assertion goes along with Nikolaus Pevsner's statement that the history of architecture is primarily a history of shaped conceptual-vision. (Pevsner, 1957, p. 23) This is significant in that most all ancient cities are built on a sacred central temple where the population originally met and thought itself swathed and protected by a version of the magic circle. (Karatani) As examples there is Babylon and Mecca, cities constructed on and round sacred sites, as well as Jerusalem, which was built on the supposed pivotal rock of the earth. (Scully, 1990, pp. 141-144) The city of Rome too was legendarily shaped around a sacred Pagan alter. (Scully, 1990, p. 25)

The first known rounded temples in proto-Western culture, consisting of columns topped with a dome, originated in Persia where they were used to venerate flame. The Greeks later built similar rounded structures to venerate their Goddesses and Gods. (Boardman) Such domed, circular, sacred space expanded and circumscribed most Greek cities, as Greek cities were often filled in from a circular defining peripheral circumscription whose radius orbited around a central devotional shrine, generally based upon a circular space marked off for divination by the augur with his staff. Indeed actual circular temples were relatively widespread in ancient Greece (at Delphi for example) (Hood) and the pattern was transmitted thereafter to Roman culture. Moreover, there were hundreds of Mithraic temples in the Roman empire (called *mithraea*) which were habitually built underground in imitation of rounded caves. These subterranean temples were filled with an extremely elaborate iconography: carved reliefs, statues, and paintings, depicting a variety of enigmatic figures and scenes. This iconography is our primary source of knowledge about Mithraic beliefs, but because we do not have any written accounts of its meaning the ideas that it expresses have proven extraordinarily difficult to decipher. The typical mithraeum was a modest subterranean chamber (on the order of 22.5 by 9 metres (75 feet by 30 feet)) with a vaulted ceiling which, on average, could hold twenty to thirty people at a time. At the back of the mithraeum was always found a representation, usually a carved relief but sometimes a statue or painting, of the central icon of Mithraism; the *tauroctony* bull-slaying scene in which the God of the cult, Mithras (accompanied by a dog, a snake, a raven, and a scorpion) is shown in the act of slaying a bull. The tauroctony depicts the bull's slaying as taking place inside a cave. (McEvedy)

Too we might consider the Tarxien temples at Malta, places of worship used first in the Copper Age and again 1000 years later (in approximately 2500 BC) as a burial place during the Bronze Age. With their beautiful spiral and dot motifs, the Tarxien temples are undoubtedly marvellously embellished. The first temple one may enter is the third temple that was built, dating back to 3300 BC. As one enters one comes across a stimulating Goddess of fertility. (Baring & Cashford)

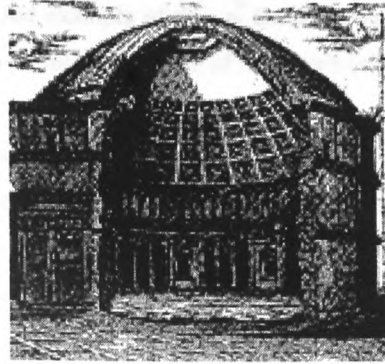
The visual and associative power of the circular space was deemed apt for the greatest shrine dedicated to all of the Pagan Gods of ancient Rome, the phenomenal Pantheon built by the Emperor Hadrian in 125 AD, with its breathtaking 43.2 metre diameter (about 47 yards). Its name, precisely enough, stems from the Greek expression which means *all-Gods*. The Pantheon is almost monolithically enclosed as it is a fully coffered dome with only a central oculus directly open to the sky. The dome is in fact a hemisphere set upon a cylindrical wall of the same height, so that the interior of the building contains a thoroughly spherical space. (Karatani) Thus the immersion on entering is immediately within a realm of absolute spherical symmetry and sacred totality. This totality however is drilled open to the sky (via the round oculus) thus diffusing it with light and transforming it into an enormous globule of palpable light (if not being pierced by a column of rain clamouring down and splashing on the hard marble floor with breathtaking abandon, as I once observed). On sunny days the direct rays of the noon sun enter the Pantheon as a cone or shaft of pure radiant light-energy and as one light-headedly steps into it, one feels at the very heart of some golden alveolus.



Pantheon



Pantheon



drawing of the *Pantheon*

An earlier dome built to the Goddess Venus in the 3rd century AD at Baalbek requires mention here too as it sports a 10 metre (32.8 feet) dome in diameter. Additionally, Roman round temples at Tivoli and at Spalato have survived up to this day. The temple at Tivoli is a circular rotunda surrounded externally by columns after the Greek fashion while that at Spalato, which was part of a the palace complex constructed by the fanatical Pagan emperor Caius Diocletian (AD 245-313), was the forerunner of many enclosed octagonal shapes and is considered the prototype for the ensuing round Christian churches to follow.

As we have established, round buildings constructed in the West have most often centred around some focal point of great importance (omphalos) and hence circular Christian churches share the same microcosmic modelling function as Pagan temples. (Pennick, 1979, p. 121) One admirable example of this, which still stands today, is St. Michael's Chapel at Fulda, Germany, with its central omphalotic stone. Also the church at San Vitale at Ravenna was designed to model a microcosm of the world and it is also interesting to note that it holds a pavement labyrinth. This church served as a later model for the famous centred Chapel Palatine of the Emperor Charlmagne (747-814) at Aachen, Germany, which I had the privilege of visiting twice.

Indeed many early Christian churches were built in a circular fashion before taking on the crucifix form, but perhaps the least remembered were those built by the Templars, the group of knights who created an occult chivalric order in the 12th century AD for the ostensible purpose of protecting pilgrims on their voyage to Jerusalem. By serving as protectors and consequently pseudo-bankers to the fortunes of Christendom, the Templars grew wealthy and powerful and with their wealth commanded the construction of circular churches all over Europe and the Near East. For the Templars too, the circular configuration of the space was seen as a microcosm of the macrocosm. Unfortunately most of their churches were destroyed when the Templars themselves were destroyed under Papal order (whether for insubordination, Gnostic heresy or pederasty it is not clear). However during the Renaissance round churches achieved something of a renaissance themselves, as renaissance architects began to rediscover, after centuries of disuse, the circular principles through the study

of forgotten texts and ruins. A good example of this is Donato Bramante's circular *Tempietto* of St. Peter Montorio (1502) in Rome, erected on the reputed site of St. Peter's (circa ?-66 AD) upside down crucifixion.

Another earlier psychically encircling sacred space that followed the continuum of the nymphaea is the totally enclosing monastery gardens of the 12th, 13th and 14th centuries; gardens which were determined to be the favoured province of the Christian Virgin. Known as *Ortus Conclusus*, the enclosed cloister garden embraced the irrational and paradoxical miracle of Virgin conception itself as its paradigm and hence offers us the characteristic immersive space of the European Middle Ages. The impenetrable cloistered garden, with its nymphaea-like central fountain, was considered a place of metaphysical enclosure which opened up a space of communications with a holy majestic scope. Once again we see the connecting of secluded space and the presence of moisture in connection to feminine traits and disembodied communications. This adaptation of the pagan sacred grove would seem to be consistent with the diverse metaphysical systems and practices of the Middle Ages which represented various attempts over the 5th century through the 15th century to assimilate theoretical traditions inherited from antiquity into early Christianity. This would be consistent with the central theme of medieval theory which was *translatio studii*, the preservation of ancient learning through continuous commentary. (Eliade, 1991) The neo-Platonist tradition, for example, endured by this medieval procedure and made adaptive to a variety of Christian theoretical and theological positions as it too offered virtual propositions concerning the immersion of the human into a higher-order immutable unity.

Medievalism spans the centuries between the first sack of Rome (AD 410) up to the start of the Renaissance with Christianity being the dominant (but by no means sole) ideological force. Gothic art is art from Medievalism's northern Europe from the 12th into the 15th century and successor to the Romanesque (however there is little gothic art in Provence, or in Italy itself). During the 15th century Italian intellectuals and artists such as Leon Battista Alberti (1404-1472) and Lorenzo Valla (1407-1457), who were attuned to the newly rediscovered classical aesthetic, began to use the adjective *gothic* to convey their sense of disappointment in architecture of their day which they viewed as rustic and crude compared to that of ancient Rome. The word was overtly pejorative as it derived from the Goths who had sacked Rome in AD 410 and again in AD 455, but it eventually outlasted its role as an epithet of derision.

In architecture the Gothic is characterised by experiments concentrating on reducing the proportion of the structure needed for the supporting framework through the use of broken arch vaulting on the inside and buttressing on the outside. The result was height and lightness of construction, enormous vaulted spans of space, and vast window areas which encouraged stained glass, such as seen at Notre Dame de Paris. Notre Dame de Paris, with its great rose window spreading nearly 9 metres (30 feet) across, began construction in the mid-12th century (1163) and was substantially expanded under the architect Pierre de Montreuil (1200-1266), along with other architects. Its construction was followed by a string of cathedrals which, taken

transcendent visionary impulse together with really dark, macabre, irrational aspects, similar to the outlandish Flamboyant Gothic orb typical of Hieronymus Bosch (1450-1516) as seen in Bosch's 220 by 195 centimetre (nearly 7 by 6.3 feet) *The Garden of Earthly Delight* (1504), which I gazed upon at the Museo del Prado in Madrid.



Hieronymus Bosch, *The Garden of Earthly Delight*

The Isenheim Altarpiece was executed for the Antoinite monastery hospital chapel of Saint Anthony's Monastery in Isenheim (Alsace). It is a carved shrine with two sets of folding wings and three views. The first, with the wings closed, is a crucifixion showing a harrowingly twisted, bloody and scabby figure of Christ on the cross flanked on the left by the lamenting Madonna (who is being consoled by John the Apostle) and Mary Magdelene and on the right by John the Baptist. Christ appears hideous; his skin swollen and torn as a result of the flagellation endured. When the outer wings are opened, three scenes of celebration are revealed: the annunciation, the cherub concert for Madonna and Child, and the resurrection.

Concerning the expansive impetus of larger-scaled altarpiece paintings, we need consider briefly Jan van Eyck (1385-1441) of the Netherlands school, who is recognised as having been the first to exploit the full potential of the new medium of oil painting towards immersively suggestive ends in his altarpiece masterwork *The Adoration of the Lamb* (1432) at the Church of Saint Bavo in Ghent, Belgium; a polyptych consisting of twenty panels. This monumental work still hangs in its original setting at the Cathedral, though now sadly covered with reflective glass. Also Rogier Van der Weyden's (1400-1464) immense altarpiece *Judgement Dernier* (Last Judgement) (1452) at the magnificent late-15th century Hôtel-Dieu in Beaune (Côte-d'Or) impresses with its vast scale mixed with penetrating clear light. It is perfectly displayed with no interfering glass barrier.

During the 12th, 13th and 14th centuries, as the hazard of barbarous assault lessened, the medieval cloister gardens, which, as established, in part evolved out of sacred nymphaea-groves, began to expand out of the confines of monastic space (with its slow psychic accentuations) and into the exterior premises of the monastery or castle. As the orders of knighthood became consequential in modelling the sociable regimentation of movement, the knight's gallant tradition of courtly love and chivalry developed outward and the medieval exterior garden became a setting for many secular activities. Hence the link to sacred nymphaea-groves was nearly lost.

Eventually though the abstemious cloister garden turned medieval outdoor garden was replaced by the renaissance pleasure garden, which as we have seen reinstated the existence of nymphaea-based grottoes in no uncertain terms. Here a seductive loquaciousness replaces the joys of the solitary mind as the renaissance humanist imagination opts for a conception of fertile nature which celebrates humanity's sensual appetites.